

SEQUENCE LISTING

<110> Nagaike, Kazuhiro
Mori, Yasuko
Gomi, Yasuyuki
Takahashi, Michiaki
Kouichi, Yamanishi

<120> Recombinant varicella-zoster virus

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<140> 10591787

<141> 2009-05-19

<150> PCT/JP2005/003652

<151> 2005-03-05

<150> JP 2004-063277

<151> 2004-03-05

<160> 91

<170> PatentIn version 3.2

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Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly Gly Phe Arg Arg Ile	
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Leu Phe Gly Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val
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Ala His Ala Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro
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Ala Gln Gly Lys Ser Pro Lys Lys Lys Thr Leu Lys Val Lys Val Pro
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Leu Tyr His Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala
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Ser Val Val Leu Ala Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr
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His Ala Trp Ala Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu
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Asn Ala Arg Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala
915 920 925

Gly Ala Val Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg
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Leu Ala Arg Ala Val Phe Ala Ser Ser Arg Thr Phe Gly Pro Ala Ser
995 1000 1005

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atcgttttatt tacgta atg gca tct tcc gac ggt gac aga ctt tgt cgc tct	11044
Met Ala Ser Ser Asp Gly Asp Arg Leu Cys Arg Ser	
585 590 595	
aat gca gtg cgt cgt aaa aca acg cct agt tat tcc gga caa tat cga	11092
Asn Ala Val Arg Arg Lys Thr Thr Pro Ser Tyr Ser Gly Gln Tyr Arg	
600 605 610	
acc gcg cgg cga agt gtg gtc gta gga ccc ccc gat gat tca gac gac	11140
Thr Ala Arg Arg Ser Val Val Val Gly Pro Pro Asp Asp Ser Asp Asp	
615 620 625	
tcg ttg ggt tac att acc aca gtt ggg gcc gat tct cct tct cca gtg	11188
Ser Leu Gly Tyr Ile Thr Thr Val Gly Ala Asp Ser Pro Ser Pro Val	
630 635 640	
tac gcg gat ctt tat ttt gaa cat aaa aat acg acc cct cgc gta cat	11236
Tyr Ala Asp Leu Tyr Phe Glu His Lys Asn Thr Thr Pro Arg Val His	
645 650 655 660	
caa cca aac gac tcc agc gga tcg gaa gat gac ttt gaa gac atc gat	11284
Gln Pro Asn Asp Ser Ser Gly Ser Glu Asp Phe Glu Asp Ile Asp	
665 670 675	
gaa gta gtg gcc gcc ttt cgg gag gcc cgt ttg aga cat gaa ctg gtt	11332
Glu Val Val Ala Ala Phe Arg Glu Ala Arg Leu Arg His Glu Leu Val	
680 685 690	
gaa gat gct gta tat gaa aac ccg cta agt gta gaa aaa cca tct aga	11380
Glu Asp Ala Val Tyr Glu Asn Pro Leu Ser Val Glu Lys Pro Ser Arg	
695 700 705	
tct ttt act aaa aat gcg gcg gtt aaa cct aaa tta gag gat tca ccg	11428
Ser Phe Thr Lys Asn Ala Ala Val Lys Pro Lys Leu Glu Asp Ser Pro	
710 715 720	
aag cga gct ccc ccg gga gca ggc gca att gcc agc ggg aga cca att	11476
Lys Arg Ala Pro Pro Gly Ala Gly Ala Ile Ala Ser Gly Arg Pro Ile	
725 730 735 740	
tcc ttc agc act gca cca aaa acc gca aca agc tcg tgg tgc ggt cct	11524
Ser Phe Ser Thr Ala Pro Lys Thr Ala Thr Ser Ser Trp Cys Gly Pro	
745 750 755	
acg cca tca tat aac aaa cgc gtc ttt tgt gaa gcg gtc cgg cgc gta	11572
Thr Pro Ser Tyr Asn Lys Arg Val Phe Cys Glu Ala Val Arg Arg Val	
760 765 770	
gcc gcc atg cag gca caa aag gct gcc gaa gcg gct tgg aat agt aat	11620
Ala Ala Met Gln Ala Gln Lys Ala Ala Glu Ala Ala Trp Asn Ser Asn	

775	780	785	
ccc cca agg aat aac gcc gaa tta gac cgt ttg tta acc gga gcc gtt			11668
Pro Pro Arg Asn Asn Ala Glu Leu Asp Arg Leu Leu Thr Gly Ala Val			
790	795	800	
att cgt att acg gtg cat gag ggt tta aat tta ata caa gcc gct aat			11716
Ile Arg Ile Thr Val His Glu Gly Leu Asn Leu Ile Gln Ala Ala Asn			
805	810	815	820
gaa gca gac cta ggt gaa gga gca tcg gta tcc aaa cgt gga cat aat			11764
Glu Ala Asp Leu Gly Glu Gly Ala Ser Val Ser Lys Arg Gly His Asn			
	825	830	835
cga aaa act gga gat tta cag ggg ggc atg ggt aat gaa cct atg tac			11812
Arg Lys Thr Gly Asp Leu Gln Gly Gly Met Gly Asn Glu Pro Met Tyr			
	840	845	850
gca caa gtt cgt aag cca aaa agt cga acg gat aca caa acg act ggg			11860
Ala Gln Val Arg Lys Pro Lys Ser Arg Thr Asp Thr Gln Thr Thr Gly			
	855	860	865
cgt ata act aat cga agt agg gcc cgt tct gca tca aga act gat acg			11908
Arg Ile Thr Asn Arg Ser Arg Ala Arg Ser Ala Ser Arg Thr Asp Thr			
	870	875	880
cga aaa tag ggatataatt acgcagtaac ggtttaccg gtattatgta			11957
Arg Lys			
885			
taataaataa acgtataaaa gacagtcgtg gtttgtgttt attataaatg tgtattatat			12017
gtcacatatt ataaactggt taaatagtag cacgtgggtat tatgaacagt ttataatcag			12077
ttgctaccaa acaaacccca ttagacggcg ggttttgata aagggaatcg cttattttaa			12137
ctaaagattt tactctataa gt atg gag tgt aat tta gga acc gaa cat cct			12189
	Met Glu Cys Asn Leu Gly Thr Glu His Pro		
	890		895
agt aca gat acg tgg aat cgt agt aaa acg gaa caa gcg gtt gtg gac			12237
Ser Thr Asp Thr Trp Asn Arg Ser Lys Thr Glu Gln Ala Val Val Asp			
	900	905	910
gca ttt gat gaa tcg ttg ttt ggt gat gta gca tcg gat att gga ttt			12285
Ala Phe Asp Glu Ser Leu Phe Gly Asp Val Ala Ser Asp Ile Gly Phe			
	915	920	925
gaa acg tcg tta tat tca cat gca gtt aaa act gct ccg tct ccg cct			12333
Glu Thr Ser Leu Tyr Ser His Ala Val Lys Thr Ala Pro Ser Pro Pro			
	930	935	940
tggtta gct agc cct aaa att tta tat caa cag tta ata cgg gat ctt			12381
Trp Val Ala Ser Pro Lys Ile Leu Tyr Gln Gln Leu Ile Arg Asp Leu			
	945	950	955
			960
gat ttt tca gaa ggg ccg cgt tta cta tca tgt ctt gaa acc tgg aac			12429

Asp	Phe	Ser	Glu	Gly	Pro	Arg	Leu	Leu	Ser	Cys	Leu	Glu	Thr	Trp	Asn	
				965					970						975	
gag	gat	tta	ttc	tca	tgt	ttt	cct	att	aat	gag	gac	cta	tat	tcc	gat	12477
Glu	Asp	Leu	Phe	Ser	Cys	Phe	Pro	Ile	Asn	Glu	Asp	Leu	Tyr	Ser	Asp	
			980					985					990			
atg	atg	ggt	tta	tcc	ccg	gat	cca	gat	gac	ggt	atc	tca	acc	ggt	tca	12525
Met	Met	Val	Leu	Ser	Pro	Asp	Pro	Asp	Asp	Val	Ile	Ser	Thr	Val	Ser	
		995					1000					1005				
acc	aaa	gac	cat	ggt	gaa	atg	ttt	aat	tta	aca	acc	cgg	ggt	tcc		12570
Thr	Lys	Asp	His	Val	Glu	Met	Phe	Asn	Leu	Thr	Thr	Arg	Gly	Ser		
	1010					1015					1020					
ggt	cga	ttg	cct	agt	cca	cca	aag	caa	ccg	acg	ggg	ctt	cca	gct		12615
Val	Arg	Leu	Pro	Ser	Pro	Pro	Lys	Gln	Pro	Thr	Gly	Leu	Pro	Ala		
	1025					1030					1035					
tac	ggt	cag	gag	gtc	cag	gat	tcg	ttt	acc	gta	gaa	cta	cgc	gcc		12660
Tyr	Val	Gln	Glu	Val	Gln	Asp	Ser	Phe	Thr	Val	Glu	Leu	Arg	Ala		
	1040					1045					1050					
cgg	gaa	gaa	gca	tac	aca	aaa	cta	cta	ggt	act	tat	tgt	aaa	tcg		12705
Arg	Glu	Glu	Ala	Tyr	Thr	Lys	Leu	Leu	Val	Thr	Tyr	Cys	Lys	Ser		
	1055					1060					1065					
att	ata	cgt	tat	ctc	caa	gga	acg	gcg	aaa	agg	acg	aca	ata	ggt		12750
Ile	Ile	Arg	Tyr	Leu	Gln	Gly	Thr	Ala	Lys	Arg	Thr	Thr	Ile	Gly		
	1070					1075					1080					
ctt	aat	ata	caa	aac	cct	gac	cag	aaa	gct	tac	acg	caa	ctc	agg		12795
Leu	Asn	Ile	Gln	Asn	Pro	Asp	Gln	Lys	Ala	Tyr	Thr	Gln	Leu	Arg		
	1085					1090					1095					
caa	agt	att	cta	ctt	aga	tat	tat	cgt	gag	gtg	gca	agt	ttg	gcg		12840
Gln	Ser	Ile	Leu	Leu	Arg	Tyr	Tyr	Arg	Glu	Val	Ala	Ser	Leu	Ala		
	1100					1105					1110					
cgt	ctt	ctg	tac	cta	cat	tta	tat	tta	acc	gta	acg	cgt	gaa	ttt		12885
Arg	Leu	Leu	Tyr	Leu	His	Leu	Tyr	Leu	Thr	Val	Thr	Arg	Glu	Phe		
	1115					1120					1125					
tcc	tgg	cgt	ttg	tac	gcc	agt	caa	tct	gca	cac	ccg	gac	gtg	ttt		12930
Ser	Trp	Arg	Leu	Tyr	Ala	Ser	Gln	Ser	Ala	His	Pro	Asp	Val	Phe		
	1130					1135					1140					
gcg	gct	tta	aaa	ttc	acc	tgg	acc	gaa	cgt	cga	cag	ttc	acg	tgt		12975
Ala	Ala	Leu	Lys	Phe	Thr	Trp	Thr	Glu	Arg	Arg	Gln	Phe	Thr	Cys		
	1145					1150					1155					
gcg	ttt	cat	cct	gta	tta	tgc	aac	cac	ggc	att	gtg	tta	tta	gaa		13020
Ala	Phe	His	Pro	Val	Leu	Cys	Asn	His	Gly	Ile	Val	Leu	Leu	Glu		
	1160					1165					1170					
ggg	aaa	cca	cta	aca	gcg	tct	gcc	ttg	agg	gaa	ata	aat	tac	cgc		13065
Gly	Lys	Pro	Leu	Thr	Ala	Ser	Ala	Leu	Arg	Glu	Ile	Asn	Tyr	Arg		

1175		1180		1185	
cgc cga gaa ctg gga ctg cct cta gtt aga tgt ggt ctt gtt gaa	13110				
Arg Arg Glu Leu Gly Leu Pro Leu Val Arg Cys Gly Leu Val Glu					
1190		1195		1200	
gaa aac aaa tct ccg ttg gtt caa caa ccc tca ttt tcg gtt cat	13155				
Glu Asn Lys Ser Pro Leu Val Gln Gln Pro Ser Phe Ser Val His					
1205		1210		1215	
tta cca cgg tcg gtg ggt ttt ctt acc cac cac att aag cgt aag	13200				
Leu Pro Arg Ser Val Gly Phe Leu Thr His His Ile Lys Arg Lys					
1220		1225		1230	
tta gac gca tat gcg gtc aaa cat cct caa gaa ccg aga cat gta	13245				
Leu Asp Ala Tyr Ala Val Lys His Pro Gln Glu Pro Arg His Val					
1235		1240		1245	
cga gcg gat cat cct tac gca aaa gtt gtt gaa aat aga aac tac	13290				
Arg Ala Asp His Pro Tyr Ala Lys Val Val Glu Asn Arg Asn Tyr					
1250		1255		1260	
ggt agt agc atc gaa gct atg att tta gca cct ccg tcc cca tcc	13335				
Gly Ser Ser Ile Glu Ala Met Ile Leu Ala Pro Pro Ser Pro Ser					
1265		1270		1275	
gag atc ctg ccg ggg gac cca cca cgc cca ccc acg tgt ggg ttt	13380				
Glu Ile Leu Pro Gly Asp Pro Pro Arg Pro Pro Thr Cys Gly Phe					
1280		1285		1290	
tta acg cgt taa acgtcattgg ggtagagggt gtaaataaat tacgaaaacg	13432				
Leu Thr Arg					
1295					
tgcatgcgtt ttttatTTTTT acaatgcgcc gtatatggta tgtctgtcat gtgctctaaa	13492				
gtcccatata taaaagaagc cccaacgagt gtatgcgtat tgcgtaccgc gaccctggga	13552				
tgTTTTacag gcgcgtttgt ttgtctcggt tataagt atg cag tcg ggt cat tat	13607				
				Met Gln Ser Gly His Tyr	
				1300	
aac cgg agg caa tcc cgc cga cag cgg ata tcg tct aat acc aca	13652				
Asn Arg Arg Gln Ser Arg Arg Gln Arg Ile Ser Ser Asn Thr Thr					
1305		1310		1315	
gac tcc ccc cgt cac aca cac gga aca cgt tat cgg tca acc aat	13697				
Asp Ser Pro Arg His Thr His Gly Thr Arg Tyr Arg Ser Thr Asn					
1320		1325		1330	
tggtat aca cac cca ccc cag ata ttg tcc aat tca gaa aca tta	13742				
Trp Tyr Thr His Pro Pro Gln Ile Leu Ser Asn Ser Glu Thr Leu					
1335		1340		1345	
gtt gcg gtt caa gaa cta ctg aac tcc gag atg gat cag gac agc	13787				
Val Ala Val Gln Glu Leu Leu Asn Ser Glu Met Asp Gln Asp Ser					
1350		1355		1360	

agt tct gac	gca tcg gat gat ttt	ccg gga tac gcc tta	cat cat	13832
Ser Ser Asp	Ala Ser Asp Asp Phe	Pro Gly Tyr Ala Leu	His His	
1365	1370	1375		
tct aca tat	aat gga tcc gaa caa	aat aca tca act tcc	aga cat	13877
Ser Thr Tyr	Asn Gly Ser Glu Gln	Asn Thr Ser Thr Ser	Arg His	
1380	1385	1390		
gaa aat cgc	ata ttt aaa tta acg	gag agg gaa gct aat	gag gaa	13922
Glu Asn Arg	Ile Phe Lys Leu Thr	Glu Arg Glu Ala Asn	Glu Glu	
1395	1400	1405		
atc aac atc	aat acg gac gcg atc	gac gac gag gga gag	gcg gag	13967
Ile Asn Ile	Asn Thr Asp Ala Ile	Asp Asp Glu Gly Glu	Ala Glu	
1410	1415	1420		
gag gga gag	gcg gag gag gac gcg	atc gac gac gag gga	gag gcg	14012
Glu Gly Glu	Ala Glu Glu Asp Ala	Ile Asp Asp Glu Gly	Glu Ala	
1425	1430	1435		
gag gag gga	gag gcg gag gag gac	gcg att gac gac gag	gga gag	14057
Glu Glu Gly	Glu Ala Glu Glu Asp	Ala Ile Asp Asp Glu	Gly Glu	
1440	1445	1450		
gcg gag gag	gga gag gcg gag gag	gac gcg att gac gac	gag gga	14102
Ala Glu Glu	Gly Glu Ala Glu Glu	Asp Ala Ile Asp Asp	Glu Gly	
1455	1460	1465		
gag gcg gag	gag gga gag gcg gag	gag gga gag gcg gag	gag gga	14147
Glu Ala Glu	Glu Gly Glu Ala Glu	Glu Gly Glu Ala Glu	Glu Gly	
1470	1475	1480		
gag gcg gag	gag gac gcg atc gac	gac gag gga gag gcg	gag gag	14192
Glu Ala Glu	Glu Asp Ala Ile Asp	Asp Glu Gly Glu Ala	Glu Glu	
1485	1490	1495		
gac gcg gcg	gag gag gac gcg atc	gac gac gag gga gag	gcg gag	14237
Asp Ala Ala	Glu Glu Asp Ala Ile	Asp Asp Glu Gly Glu	Ala Glu	
1500	1505	1510		
gag gat tat	ttt tct gta agt caa	gtt tgc agt cga gac	gcg gat	14282
Glu Asp Tyr	Phe Ser Val Ser Gln	Val Cys Ser Arg Asp	Ala Asp	
1515	1520	1525		
gag gtt tat	ttt acg tta gac ccg	gaa ata agt tac agt	acc gat	14327
Glu Val Tyr	Phe Thr Leu Asp Pro	Glu Ile Ser Tyr Ser	Thr Asp	
1530	1535	1540		
ctt cgc att	gca aag gtt atg gag	cct gcg gta tca aag	gaa ctt	14372
Leu Arg Ile	Ala Lys Val Met Glu	Pro Ala Val Ser Lys	Glu Leu	
1545	1550	1555		
aat gta tca	aaa cgt tgt gtt gaa	cct gtt acc cta aca	ggc tct	14417
Asn Val Ser	Lys Arg Cys Val Glu	Pro Val Thr Leu Thr	Gly Ser	
1560	1565	1570		

atg tta gcg cat aat ggg ttt gat gag tcc tgg ttt gct atg cgc	14462
Met Leu Ala His Asn Gly Phe Asp Glu Ser Trp Phe Ala Met Arg	
1575 1580 1585	
gaa tgt acc cgt cgc gaa tat att acg gtc caa gga tta tac gac	14507
Glu Cys Thr Arg Arg Glu Tyr Ile Thr Val Gln Gly Leu Tyr Asp	
1590 1595 1600	
cca att cat tta cgg tat cag ttt gat act tcc cgg atg aca ccc	14552
Pro Ile His Leu Arg Tyr Gln Phe Asp Thr Ser Arg Met Thr Pro	
1605 1610 1615	
cca cag att ttg aga act ata cca gcc ctt cct aac atg aca ctt	14597
Pro Gln Ile Leu Arg Thr Ile Pro Ala Leu Pro Asn Met Thr Leu	
1620 1625 1630	
ggg gaa ctt tta ttg att ttt cct att gaa ttt atg gcc cag cca	14642
Gly Glu Leu Leu Leu Ile Phe Pro Ile Glu Phe Met Ala Gln Pro	
1635 1640 1645	
att tct ata gaa cgt att tta gtt gaa gat gta ttt tta gat agg	14687
Ile Ser Ile Glu Arg Ile Leu Val Glu Asp Val Phe Leu Asp Arg	
1650 1655 1660	
cgg gct tcc agt aaa aca cat aaa tac ggc ccg cgt tgg aat tcc	14732
Arg Ala Ser Ser Lys Thr His Lys Tyr Gly Pro Arg Trp Asn Ser	
1665 1670 1675	
gtc tac gca ctt cca tat aat gcg ggt aaa atg tat gta caa cac	14777
Val Tyr Ala Leu Pro Tyr Asn Ala Gly Lys Met Tyr Val Gln His	
1680 1685 1690	
att cct ggg ttt tat gac gtg tcc tta cgt gct gtg ggc caa gga	14822
Ile Pro Gly Phe Tyr Asp Val Ser Leu Arg Ala Val Gly Gln Gly	
1695 1700 1705	
acg gcc att tgg cat cac atg ata tta tcc aca gca gca tgc gct	14867
Thr Ala Ile Trp His His Met Ile Leu Ser Thr Ala Ala Cys Ala	
1710 1715 1720	
att tct aat cgc att tca cat gga gat gga tta gga ttt ttg tta	14912
Ile Ser Asn Arg Ile Ser His Gly Asp Gly Leu Gly Phe Leu Leu	
1725 1730 1735	
gac gcg gca att cgt att agc gca aac tgt att ttt ttg gga cgt	14957
Asp Ala Ala Ile Arg Ile Ser Ala Asn Cys Ile Phe Leu Gly Arg	
1740 1745 1750	
aac gat aat ttt ggc gtg ggg gat cca tgt tgg tta gaa gac cat	15002
Asn Asp Asn Phe Gly Val Gly Asp Pro Cys Trp Leu Glu Asp His	
1755 1760 1765	
ctt gcc gga tta cca cga gaa gcc gta ccc gac gta ctc caa gtg	15047
Leu Ala Gly Leu Pro Arg Glu Ala Val Pro Asp Val Leu Gln Val	
1770 1775 1780	
aca cag ttg gtt ttg cca aat cgg ggt cca acg gtt gcc att atg	15092

Thr	Gln	Leu	Val	Leu	Pro	Asn	Arg	Gly	Pro	Thr	Val	Ala	Ile	Met	
		1785					1790					1795			
cgt	ggg	ttt	ttt	ggg	gcg	ttg	gca	tat	tgg	ccc	gaa	cta	aga	att	15137
Arg	Gly	Phe	Phe	Gly	Ala	Leu	Ala	Tyr	Trp	Pro	Glu	Leu	Arg	Ile	
		1800					1805					1810			
gct	ata	agt	gaa	cca	tct	aca	tct	ttg	gtg	cga	tat	gct	acc	ggg	15182
Ala	Ile	Ser	Glu	Pro	Ser	Thr	Ser	Leu	Val	Arg	Tyr	Ala	Thr	Gly	
		1815					1820					1825			
cac	atg	gaa	ctt	gcc	gaa	tgg	ttt	tta	ttt	tca	cgt	aca	cat	agt	15227
His	Met	Glu	Leu	Ala	Glu	Trp	Phe	Leu	Phe	Ser	Arg	Thr	His	Ser	
		1830					1835					1840			
tta	aag	cca	caa	ttt	acc	cca	acg	gaa	cgg	gaa	atg	tta	gcg	tca	15272
Leu	Lys	Pro	Gln	Phe	Thr	Pro	Thr	Glu	Arg	Glu	Met	Leu	Ala	Ser	
		1845					1850					1855			
ttt	ttt	acg	ttg	tat	gtt	act	ctt	ggg	gga	gga	atg	ttg	aac	tgg	15317
Phe	Phe	Thr	Leu	Tyr	Val	Thr	Leu	Gly	Gly	Gly	Met	Leu	Asn	Trp	
		1860					1865					1870			
atc	tgt	aga	gca	act	gca	atg	tat	tta	gct	gct	cct	tac	cat	tcc	15362
Ile	Cys	Arg	Ala	Thr	Ala	Met	Tyr	Leu	Ala	Ala	Pro	Tyr	His	Ser	
		1875					1880					1885			
cgt	tcg	gct	tac	atc	gcg	gtc	tgt	gaa	tct	ctg	ccc	tat	tac	tat	15407
Arg	Ser	Ala	Tyr	Ile	Ala	Val	Cys	Glu	Ser	Leu	Pro	Tyr	Tyr	Tyr	
		1890					1895					1900			
atc	ccg	gtt	aat	agt	gac	ctg	tta	tgt	gat	tta	gag	gta	tta	ctg	15452
Ile	Pro	Val	Asn	Ser	Asp	Leu	Leu	Cys	Asp	Leu	Glu	Val	Leu	Leu	
		1905					1910					1915			
tta	ggc	gag	gtc	gac	ctc	cca	act	gtt	tgt	gaa	tcc	tac	gca	act	15497
Leu	Gly	Glu	Val	Asp	Leu	Pro	Thr	Val	Cys	Glu	Ser	Tyr	Ala	Thr	
		1920					1925					1930			
att	gca	cac	gaa	tta	acc	gga	tat	gag	gct	gtt	cgc	aca	gca	gcc	15542
Ile	Ala	His	Glu	Leu	Thr	Gly	Tyr	Glu	Ala	Val	Arg	Thr	Ala	Ala	
		1935					1940					1945			
aca	aat	ttt	atg	ata	gag	ttt	gcc	gat	tgt	tat	aag	gaa	agt	gag	15587
Thr	Asn	Phe	Met	Ile	Glu	Phe	Ala	Asp	Cys	Tyr	Lys	Glu	Ser	Glu	
		1950					1955					1960			
acc	gat	tta	atg	gta	agc	gcg	tac	ctg	ggg	gcc	gtt	tta	ttg	tta	15632
Thr	Asp	Leu	Met	Val	Ser	Ala	Tyr	Leu	Gly	Ala	Val	Leu	Leu	Leu	
		1965					1970					1975			
caa	cgg	gtg	ttg	ggg	cat	gca	aat	ctt	ctt	ttg	ttg	ctt	ctc	tcc	15677
Gln	Arg	Val	Leu	Gly	His	Ala	Asn	Leu	Leu	Leu	Leu	Leu	Leu	Ser	
		1980					1985					1990			
ggg	gct	gcg	ttg	tac	gga	gga	tgt	tca	att	tac	atc	ccc	cga	ggg	15722
Gly	Ala	Ala	Leu	Tyr	Gly	Gly	Cys	Ser	Ile	Tyr	Ile	Pro	Arg	Gly	

1995	2000	2005	
att tta gat gca tat aat act tta Ile Leu Asp Ala Tyr Asn Thr 2010	atg ttg gca gca agt Met Leu Ala Ala 2015	cct ctt Pro Leu 2020	15767
tac gct cac caa act tta aca tcc Tyr Ala His Gln Thr Leu Thr 2025	ttt tgg aaa gac cgc Phe Trp Lys Asp Arg 2030	gat gat Asp Asp 2035	15812
gca atg caa act ttg ggg att cga Ala Met Gln Thr Leu Gly Ile Arg 2040	ccg aca acg gac gtt Pro Thr Thr Asp Val 2045	tta ccc Leu Pro 2050	15857
aaa gag caa gac agg ata gtt cag Lys Glu Gln Asp Arg Ile Val Gln 2055	gca tca cct ata gag Ala Ser Pro Ile Glu 2060	atg aac Met Asn 2065	15902
ttc cgt ttt gtg gga ttg gag acc Phe Arg Phe Val Gly Leu Glu Thr 2070	atc tat ccc cga gaa Ile Tyr Pro Arg Glu 2075	cag ccc Gln Pro 2080	15947
att ccc tcc gtg gac cta gcc gaa Ile Pro Ser Val Asp Leu Ala Glu 2085	aat ctt atg caa tac Asn Leu Met Gln Tyr 2090	agg aat Arg Asn 2095	15992
gaa att ctg ggt ttg gat tgg aaa Glu Ile Leu Gly Leu Asp Trp Lys 2100	agc gta gcc atg cat Ser Val Ala Met His 2105	tta cta Leu Leu 2110	16037
cga aaa tat taa gggttgtgat ttttttcatt Arg Lys Tyr 2115	aggatgaaaa gaacgtttcc		16089
tagccacacc cacaaaggag tttgtaaaaat	aaaatctctg ttttagacctt	aaaatttggt	16149
gtgtgtgttg tgtgggggggt ccgtgaggat	cgacctttac aagatataat	ttgtccatat	16209
cgca atg ttt tct cgg ttt Met Phe Ser Arg Phe 2120	gcg cgt tcc ttt tcc Ala Arg Ser Phe Ser 2125	agc gat gat aga Ser Asp Asp Arg 2130	16255
acg cgt aaa tct tat gat Thr Arg Lys Ser Tyr Asp 2130	ggt agt tac caa agt Gly Ser Tyr Gln Ser 2135	ttt aat gcc ggc Phe Asn Ala Gly 2140	16300
gaa cgt gat ttg ccc aca Glu Arg Asp Leu Pro Thr 2145	cct acc cgg gac tgg Pro Thr Arg Asp Trp 2150	tgt tct att tcc Cys Ser Ile Ser 2155	16345
caa cgc ata acc agc gag Gln Arg Ile Thr Ser Glu 2160	cgc gtg agg gat gga Arg Val Arg Asp Gly 2165	tgt ctt att cca Cys Leu Ile Pro 2170	16390
acg ccc ggc gag gct ttg Thr Pro Gly Glu Ala Leu 2175	gag acg gcg gta aag Glu Thr Ala Val Lys 2180	gct tta tct gaa Ala Leu Ser Glu 2185	16435

aag Lys 2190	acc Thr	gac Asp	agc Ser	cta Leu	aca Thr 2195	tcg Ser	ccg Pro	gtt Val	tta Leu	caa Gln 2200	agt Ser	acc Thr	gaa Glu	aga Arg	16480
cac His 2205	agt Ser	gtt Val	ctg Leu	ctt Leu	gga Gly 2210	tta Leu	cac His	cat His	aat Asn	aat Asn 2215	gtt Val	cct Pro	gaa Glu	tcg Ser	16525
ttg Leu 2220	gtg Val	gtc Val	tcg Ser	tgt Cys	atg Met 2225	tct Ser	aac Asn	gat Asp	gtt Val	cat His 2230	gac Asp	ggg Gly	ttt Phe	atg Met	16570
cag Gln 2235	cgt Arg	tat Tyr	atg Met	gaa Glu	aca Thr 2240	att Ile	caa Gln	aga Arg	tgt Cys	ttg Leu 2245	gat Asp	gac Asp	ctg Leu	aaa Lys	16615
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cag Gln 2265	tat Tyr	ctc Leu	aaa Lys	tac Tyr	acc Thr 2270	aca Thr	gga Gly	gcc Ala	gag Glu	gta Val 2275	ccg Pro	gtg Val	act Thr	tca Ser	16705
gag Glu 2280	aag Lys	gta Val	aat Asn	aaa Lys	aag Lys 2285	tct Ser	aaa Lys	tcc Ser	acg Thr	gtt Val 2290	ttg Leu	ttg Leu	ttt Phe	tca Ser	16750
tcc Ser 2295	gta Val	gtt Val	gcc Ala	aat Asn	aaa Lys 2300	cca Pro	ata Ile	tcc Ser	aga Arg	cat His 2305	cct Pro	ttt Phe	aaa Lys	tct Ser	16795
aaa Lys 2310	gtt Val	ata Ile	aat Asn	tcg Ser	gat Asp 2315	tac Tyr	cgg Arg	gga Gly	ata Ile	tgt Cys 2320	cag Gln	gag Glu	cta Leu	cgt Arg	16840
gag Glu 2325	gcg Ala	tta Leu	gga Gly	gct Ala	gtg Val 2330	caa Gln	aag Lys	tat Tyr	atg Met	tat Tyr 2335	ttt Phe	atg Met	cgt Arg	cca Pro	16885
gat Asp 2340	gat Asp	cct Pro	aca Thr	aac Asn	ccc Pro 2345	agc Ser	ccg Pro	gat Asp	aca Thr	aga Arg 2350	ata Ile	cgt Arg	gta Val	caa Gln	16930
gaa Glu 2355	att Ile	gcg Ala	gct Ala	tac Tyr	acg Thr 2360	gct Ala	act Thr	ggc Gly	tac Tyr	ggg Gly 2365	tgg Trp	atg Met	tta Leu	tgg Trp	16975
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caa Gln 2385	ttt Phe	cga Arg	cgg Arg	att Ile	cga Arg 2390	ggg Gly	ccg Pro	cgc Arg	gcg Ala	tct Ser 2395	gtt Val	att Ile	cca Pro	gat Asp	17065

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Trp	Val	Val	Leu	Glu	Thr	Ser	Thr	His	Met	Trp	Phe	Ser	Arg	Ala	
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Tyr	Ala	Gln	Val	Leu	Ala	Ala	Ser	Lys	Arg	Tyr	Thr	Pro	Leu	His	
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Val 2610	Asn	Ala	Ser	Ser		His 2615	Val	Ile	Asn	Thr	Glu 2620	Ala	Pro	Leu	Asn	
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gtt Val 2640	cgt Arg	cca Pro	gac Asp	acg Thr		ggg Gly 2645	ttg Leu	gat Asp	gta Val	act Thr	gtc Val 2650	cga Arg	aaa Lys	aac Asn	cac His	17830
tgt Cys 2655	ctg Leu	gac Asp	ata Ile	ggc Gly		cat His 2660	acg Thr	gac Asp	ggg Gly	agt Ser	cca Pro 2665	gtt Val	gac Asp	cca Pro	acg Thr	17875
tat Tyr 2670	cct Pro	gat Asp	cat His	tac Tyr		acc Thr 2675	cgg Arg	ata Ile	aag Lys	gcg Ala	gaa Glu 2680	tat Tyr	gaa Glu	ggg Gly	ccg Pro	17920
gtt Val 2685	cgg Arg	gat Asp	gaa Glu	tca Ser		aac Asn 2690	aca Thr	atg Met	ttt Phe	gac Asp	caa Gln 2695	aga Arg	tcg Ser	gat Asp	tta Leu	17965
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gat Asp 2730	gtg Val	gat Asp	agc Ser	ctt Leu		aac Asn 2735	ggg Gly	tac Tyr	acc Thr	tcc Ser	gga Gly 2740	gac Asp	atg Met	cat His	aca Thr	18100
gac Asp 2745	gat Asp	gac Asp	tta Leu	tca Ser		cca Pro 2750	gat Asp	ttt Phe	ata Ile	ccc Pro	aac Asn 2755	gac Asp	gtt Val	ccc Pro	gtt Val	18145
aga Arg 2760	tgt Cys	aaa Lys	acc Thr	acg Thr		gtt Val 2765	acg Thr	ttt Phe	agg Arg	aaa Lys	aat Asn 2770	acg Thr	cct Pro	aag Lys	agt Ser	18190
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Ile Gly Thr Leu Ser Leu Phe Gly Met Gln Ala Arg Tyr Asn Leu	
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Ser Lys Glu Leu Ala Ala Lys Asp Ile His Ile Trp Asp Ile Tyr	
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Thr Gly Asp Leu Gly Pro Ile Tyr Gly Phe Gln Trp Arg His Phe	
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Ile Asp Gln Leu Gln Thr Val Ile Asp Thr Ile Lys Thr Asn Pro	
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Pro Leu Met Val Leu Pro Pro Cys His Thr Leu Cys Gln Phe Tyr	
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Val Ala Asn Gly Glu Leu Ser Cys Gln Val Tyr Gln Arg Ser Gly	
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Leu Thr Tyr Ile Val Ala His Val Thr Gly Leu Lys Thr Gly Asp	
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Leu Ile His Thr Met Gly Asp Ala His Ile Tyr Leu Asn His Ile	
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Cys Leu Lys Ile Ile Arg Asn Val Thr Asp Ile Asn Asp Phe Lys	
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Arg Phe Ile His Glu His Lys Leu Val Lys Pro Ser Ile Ile Ser	
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Thr Pro Pro Gly Val Leu Thr Pro Val Ala Val Asp Val Trp Asn	
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gtc atg tac aca ttg ttg gaa cgt tta tac cct gtg ggt aaa cgc	24304
Val Met Tyr Thr Leu Leu Glu Arg Leu Tyr Pro Val Gly Lys Arg	
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Glu Asn Leu His Gly Pro Ser Val Thr Ile His Cys Leu Gly Val	
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Leu Leu Arg Leu Leu Thr Gln Arg Ser Tyr Tyr Pro Ile Phe Val	
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Leu Glu Arg Cys Thr Asp Gly Pro Leu Ser Arg Gly Ala Lys Ala	
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Ile Met Ser Arg Ala Met Asn His Asp Glu Arg Gly Thr Ser Asp	
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tta acc cgt gtt cta cta tca tcc aac aca tca tgt tct atc aag	24529
Leu Thr Arg Val Leu Leu Ser Ser Asn Thr Ser Cys Ser Ile Lys	
3190 3195 3200	
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Tyr Asn Lys Thr Ser Glu Thr Tyr Asp Ser Val Phe Arg Asn Ser	
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Ser Thr Ser Cys Ile Pro Ser Glu Glu Asn Lys Ser Gln Asp Met	
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Phe Leu Asp Gly Cys Pro Arg Gln Thr Asp Lys Thr Ile Cys Leu	
3235 3240 3245	

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Ile	Arg	Trp	Met	Gly	Tyr	Ala	Tyr	Val	Glu	Ala	Val	Asp	Ile	Glu	
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Ala	Asp	Glu	Ala	Cys	Ala	Asn	Leu	Phe	His	Thr	Arg	Thr	Val	Ala	
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Asp Asn Glu Arg Pro Trp Ser Pro Glu Lys Thr Glu Ile Ala Arg	
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Val Lys Val Val Lys Phe Leu Arg Ser Thr Gln Lys Ile Pro Ala	
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Lys His Phe Ile Gln Ile Trp Glu Pro Leu His Ser Asn Ile Cys	
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Ser Ser Val Val Gln Asp Ser Glu Thr Leu His Arg Leu Ser Ala	

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3665	3670	3675	
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Asp Ala Thr Thr Ala Ile Glu Ser Pro Phe Thr His Ala Arg Ile			
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Ala Ile Ile Tyr Asp Met Pro Phe Val Gln Glu Gly Ile Arg Val			
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Leu Thr Gln Tyr Ala Gly Trp Leu Leu Pro Phe Asn Val Met Trp			
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Phe Ile Ile Cys Met Ile Asp Glu Tyr Leu Thr Glu Thr Pro Val			
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His Ser Ile Ser Glu Leu Phe Ala Asp Thr Val Asn Leu Ile Lys			
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Asp Glu Ala Phe Val Ser Ile Glu Glu Ala Val Thr Asn Pro Arg			
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Thr Val His Glu Ser Arg Ile Ser Ser Ala Leu Ala Tyr Arg Asp			
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Pro Tyr Val Phe Glu Thr Ser Pro Gly Met Leu Ala Arg Arg Leu			
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Arg Leu Asp Asn Gly Ile Trp Glu Ser Asn Leu Leu Ser Leu Ser			
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Thr Pro Gly Ile His Ile Glu Ala Leu Leu His Leu Leu Asn Ser			
3860	3865	3870	

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Asp Pro Glu Ala	Glu Thr Thr Ser Gly	Ser Asn Val Ala Glu His	
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Thr Arg Gly Ile	Trp Glu Lys Val Gln	Ala Ser Thr Ser Pro Ser	
3890	3895	3900	
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Met Leu Ile Ser	Thr Leu Ala Glu Ser	Gly Phe Thr Arg Phe Ser	
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Cys Lys Leu Leu	Arg Arg Phe Ile Ala	His His Thr Leu Ala Gly	
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Phe Ile His Gly	Ser Val Val Ala Asp	Glu His Ile Thr Asp Phe	
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Gln Gln Thr Leu	Gly Cys Leu Ala Leu	Val Gly Gly Leu Ala Tyr	
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Gln Leu Val Glu	Thr Tyr Ala Pro Thr	Thr Glu Tyr Val Leu Thr	
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Tyr Thr Arg Thr	Val Asn Glu Thr Glu	Lys Arg Tyr Glu Thr Leu	
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Leu Pro Ala Leu	Gly Leu Pro Pro Gly	Gly Leu Gly Gln Ile Met	
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Arg Arg Cys Phe	Ala Pro Arg Pro Leu	Ile Glu Ser Ile Gln Ala	
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Thr Arg Val Ile	Leu Leu Asn Glu Ile	Ser His Ala Glu Ala Arg	
4025	4030	4035	
gag aca aca tat	ttt aag caa aca cat	aat caa tcc tca ggt gcg	32315
Glu Thr Thr Tyr	Phe Lys Gln Thr His	Asn Gln Ser Ser Gly Ala	
4040	4045	4050	
tta tta cca caa	gca gga caa agt gcc	gta cgc gaa gcc gta cta	32360
Leu Leu Pro Gln	Ala Gly Gln Ser Ala	Val Arg Glu Ala Val Leu	
4055	4060	4065	
acc tgg ttt gac	cta cgt atg gat tca	aga tgg ggt att act ccc	32405
Thr Trp Phe Asp	Leu Arg Met Asp Ser	Arg Trp Gly Ile Thr Pro	
4070	4075	4080	

ccg	gtg	gat	gtg	ggt	atg	aca	cct	cct	att	tgt	gtt	gat	cca	ccg	32450
Pro	Val	Asp	Val	Gly	Met	Thr	Pro	Pro	Ile	Cys	Val	Asp	Pro	Pro	
			4085					4090					4095		
gct	aca	ggg	ttg	gaa	gct	gtc	atg	ata	aca	gaa	gca	cta	aag	att	32495
Ala	Thr	Gly	Leu	Glu	Ala	Val	Met	Ile	Thr	Glu	Ala	Leu	Lys	Ile	
			4100					4105					4110		
gca	tat	cct	acc	gaa	tat	aat	cgc	tct	agc	gtg	ttt	gtg	gaa	ccg	32540
Ala	Tyr	Pro	Thr	Glu	Tyr	Asn	Arg	Ser	Ser	Val	Phe	Val	Glu	Pro	
			4115					4120					4125		
tcg	ttt	gtg	cct	tat	att	att	gca	aca	agc	acg	ctt	gat	gcc	ctt	32585
Ser	Phe	Val	Pro	Tyr	Ile	Ile	Ala	Thr	Ser	Thr	Leu	Asp	Ala	Leu	
			4130					4135					4140		
tcg	gca	aca	ata	gct	ttg	tct	ttt	gat	aca	cgg	gga	ata	cag	caa	32630
Ser	Ala	Thr	Ile	Ala	Leu	Ser	Phe	Asp	Thr	Arg	Gly	Ile	Gln	Gln	
			4145					4150					4155		
gcc	ttg	tct	att	ctt	cag	tgg	gct	cgc	gat	tat	gga	tcc	gga	acc	32675
Ala	Leu	Ser	Ile	Leu	Gln	Trp	Ala	Arg	Asp	Tyr	Gly	Ser	Gly	Thr	
			4160					4165					4170		
gtg	ccc	aat	gca	gat	gga	tat	cgc	aca	aaa	cta	tct	gct	ctt	ata	32720
Val	Pro	Asn	Ala	Asp	Gly	Tyr	Arg	Thr	Lys	Leu	Ser	Ala	Leu	Ile	
			4175					4180					4185		
aca	ata	tta	gaa	cct	ttt	acc	cgt	aca	cac	ccc	cca	gta	ctt	tta	32765
Thr	Ile	Leu	Glu	Pro	Phe	Thr	Arg	Thr	His	Pro	Pro	Val	Leu	Leu	
			4190					4195					4200		
cca	tct	cac	gtt	tct	act	ata	gat	tcc	ctt	ata	tgc	gaa	ctt	cat	32810
Pro	Ser	His	Val	Ser	Thr	Ile	Asp	Ser	Leu	Ile	Cys	Glu	Leu	His	
			4205					4210					4215		
cgg	act	gtt	ggc	att	gcc	gtt	gac	ctg	ctt	ccc	cag	cac	gtc	cgt	32855
Arg	Thr	Val	Gly	Ile	Ala	Val	Asp	Leu	Leu	Pro	Gln	His	Val	Arg	
			4220					4225					4230		
cct	ttg	gtt	cct	gac	cgt	cct	tct	att	aca	aat	agc	gtt	ttt	tta	32900
Pro	Leu	Val	Pro	Asp	Arg	Pro	Ser	Ile	Thr	Asn	Ser	Val	Phe	Leu	
			4235					4240					4245		
gca	act	ctc	tat	tat	gat	gaa	ctt	tac	ggt	cgt	tgg	acc	cga	ctg	32945
Ala	Thr	Leu	Tyr	Tyr	Asp	Glu	Leu	Tyr	Gly	Arg	Trp	Thr	Arg	Leu	
			4250					4255					4260		
gat	aaa	aca	tcg	cag	gcg	ttg	gtt	gaa	aat	ttt	aca	tcc	aac	gcg	32990
Asp	Lys	Thr	Ser	Gln	Ala	Leu	Val	Glu	Asn	Phe	Thr	Ser	Asn	Ala	
			4265					4270					4275		
tta	gtg	gtt	tct	cgg	tac	atg	tta	atg	tta	caa	aaa	ttt	ttt	gcg	33035
Leu	Val	Val	Ser	Arg	Tyr	Met	Leu	Met	Leu	Gln	Lys	Phe	Phe	Ala	
			4280					4285					4290		
tgt	cgt	ttt	tat	cca	acg	cca	gat	ctt	cag	gct	gtt	ggt	atc	tgt	33080

Cys	Arg	Phe	Tyr	Pro	Thr	Pro	Asp	Leu	Gln	Ala	Val	Gly	Ile	Cys	
			4295					4300					4305		
aac	cca	aag	gtt	gaa	cgc	gat	gaa	caa	ttt	ggg	gta	tgg	cgt	tta	33125
Asn	Pro	Lys	Val	Glu	Arg	Asp	Glu	Gln	Phe	Gly	Val	Trp	Arg	Leu	
			4310					4315					4320		
aac	gat	ctt	gct	gat	gcg	gtt	ggt	cat	att	gtt	ggg	aca	ata	caa	33170
Asn	Asp	Leu	Ala	Asp	Ala	Val	Gly	His	Ile	Val	Gly	Thr	Ile	Gln	
			4325					4330					4335		
gga	atc	cga	acg	caa	atg	aga	gtg	gga	ata	tcc	agc	ctg	cgc	aca	33215
Gly	Ile	Arg	Thr	Gln	Met	Arg	Val	Gly	Ile	Ser	Ser	Leu	Arg	Thr	
			4340					4345					4350		
att	atg	gcc	gat	gct	tcc	tca	gcc	ctt	agg	gaa	tgt	gaa	aat	tta	33260
Ile	Met	Ala	Asp	Ala	Ser	Ser	Ala	Leu	Arg	Glu	Cys	Glu	Asn	Leu	
			4355					4360					4365		
atg	act	aaa	acc	tcc	act	tct	gct	att	ggg	cct	ctt	ttt	tca	acg	33305
Met	Thr	Lys	Thr	Ser	Thr	Ser	Ala	Ile	Gly	Pro	Leu	Phe	Ser	Thr	
			4370					4375					4380		
atg	gct	tcc	cgg	tat	gca	cgg	ttt	aca	cag	gat	caa	atg	gac	att	33350
Met	Ala	Ser	Arg	Tyr	Ala	Arg	Phe	Thr	Gln	Asp	Gln	Met	Asp	Ile	
			4385					4390					4395		
tta	atg	cgt	gtt	gac	aaa	cta	aca	aca	gga	gaa	aat	ata	ccc	ggt	33395
Leu	Met	Arg	Val	Asp	Lys	Leu	Thr	Thr	Gly	Glu	Asn	Ile	Pro	Gly	
			4400					4405					4410		
ctt	gca	aat	gta	gag	att	ttt	tta	aat	agg	tgg	gaa	cga	ata	gca	33440
Leu	Ala	Asn	Val	Glu	Ile	Phe	Leu	Asn	Arg	Trp	Glu	Arg	Ile	Ala	
			4415					4420					4425		
aca	gct	tgt	agg	cat	gcc	acg	gca	gtc	ccg	tcg	gcc	gaa	tct	att	33485
Thr	Ala	Cys	Arg	His	Ala	Thr	Ala	Val	Pro	Ser	Ala	Glu	Ser	Ile	
			4430					4435					4440		
gca	acc	gtg	tgt	aat	gaa	ttg	agg	cgc	ggt	tta	aaa	aat	ata	caa	33530
Ala	Thr	Val	Cys	Asn	Glu	Leu	Arg	Arg	Gly	Leu	Lys	Asn	Ile	Gln	
			4445					4450					4455		
gag	gat	cgt	gta	aat	gcc	cca	acc	tca	tat	atg	agt	cac	gcc	cga	33575
Glu	Asp	Arg	Val	Asn	Ala	Pro	Thr	Ser	Tyr	Met	Ser	His	Ala	Arg	
			4460					4465					4470		
aat	ctg	gaa	gat	cac	aag	gca	gca	gtt	tca	ttc	gtt	atg	gac	tcc	33620
Asn	Leu	Glu	Asp	His	Lys	Ala	Ala	Val	Ser	Phe	Val	Met	Asp	Ser	
			4475					4480					4485		
agg	caa	cag	ttt	att	gtg	gat	tct	gga	cct	cag	atg	ggc	gcg	gtt	33665
Arg	Gln	Gln	Phe	Ile	Val	Asp	Ser	Gly	Pro	Gln	Met	Gly	Ala	Val	
			4490					4495					4500		
tta	act	tca	caa	tgt	aat	ata	gga	aca	tgg	gag	aat	gta	aat	gca	33710
Leu	Thr	Ser	Gln	Cys	Asn	Ile	Gly	Thr	Trp	Glu	Asn	Val	Asn	Ala	

4505	4510	4515	
acg ttt tta cat gat aat gtt aaa ata acg aca acg gtc aga gac	33755		
Thr Phe Leu His Asp Asn Val Lys Ile Thr Thr Thr Val Arg Asp			
4520	4525	4530	
gta att tca gag gct ccg acg ctg ata ata gga caa aga tgg ctt	33800		
Val Ile Ser Glu Ala Pro Thr Leu Ile Ile Gly Gln Arg Trp Leu			
4535	4540	4545	
cgt cca gat gag att tta tct aat gta gat ttg cgt ctt ggc gta	33845		
Arg Pro Asp Glu Ile Leu Ser Asn Val Asp Leu Arg Leu Gly Val			
4550	4555	4560	
ccc ggg aat aca agt ggg agt gac cct taa tataaaacag gcgtgtttat	33895		
Pro Gly Asn Thr Ser Gly Ser Asp Pro			
4565	4570		
gtacattaaa gtatttgttg tttttattga ctgggcgttt cgtttgtata acgctgttgt	33955		
tgctagtatt ttcataacct cctagggttt tggagctaca cgtgcttatt caacgctctt	34015		
tgggatttga atcatcgtaa acgtagcgct cctaccagtt gagcgcgtaa ttttcgtaag	34075		
caataaaa atg gat ata att ccg cct ata gct gtc act gtt gcg gga gtg	34124		
Met Asp Ile Ile Pro Pro Ile Ala Val Thr Val Ala Gly Val			
4575	4580		
gga agc cgt aat caa ttt gac ggt gcc ctg gga ccg gcg tca ggt	34169		
Gly Ser Arg Asn Gln Phe Asp Gly Ala Leu Gly Pro Ala Ser Gly			
4585	4590	4595	
ctg tca tgt tta aga aca tct tta tcg ttt ttg cat atg aca tat	34214		
Leu Ser Cys Leu Arg Thr Ser Leu Ser Phe Leu His Met Thr Tyr			
4600	4605	4610	
gcg cat gga att aat gca acc ctg tca tca gac atg att gat gga	34259		
Ala His Gly Ile Asn Ala Thr Leu Ser Ser Asp Met Ile Asp Gly			
4615	4620	4625	
tgt tta caa gag ggt gca gca tgg act acg gat ctg tct aat atg	34304		
Cys Leu Gln Glu Gly Ala Ala Trp Thr Thr Asp Leu Ser Asn Met			
4630	4635	4640	
ggg agg ggt gtc cca gat atg tgt gct ctt gtt gat ctc ccc aat	34349		
Gly Arg Gly Val Pro Asp Met Cys Ala Leu Val Asp Leu Pro Asn			
4645	4650	4655	
cga att tca tat att aaa ctg ggg gac act acc agt acg tgc tgc	34394		
Arg Ile Ser Tyr Ile Lys Leu Gly Asp Thr Thr Ser Thr Cys Cys			
4660	4665	4670	
gtt ttg tct aga ata tac ggc gat agc cat ttt ttt acc gtt cca	34439		
Val Leu Ser Arg Ile Tyr Gly Asp Ser His Phe Phe Thr Val Pro			
4675	4680	4685	
gac gag ggt ttt atg tgc aca caa att ccc gct aga gcg ttt ttc	34484		

Asp 4690	Glu	Gly	Phe	Met	Cys 4695	Thr	Gln	Ile	Pro	Ala 4700	Arg	Ala	Phe	Phe	
gat Asp 4705	gat Asp	gtg Val	tgg Trp	atg Met	gga Gly 4710	cgt Arg	gaa Glu	gag Glu	tcg Ser	tat Tyr 4715	aca Thr	att Ile	ata Ile	act Thr	34529
gta Val 4720	gac Asp	tca Ser	acg Thr	gga Gly	atg Met 4725	gcc Ala	atc Ile	tat Tyr	cgt Arg	cag Gln 4730	gga Gly	aac Asn	ata Ile	tct Ser	34574
ttt Phe 4735	att Ile	ttt Phe	gat Asp	cca Pro	cat His 4740	ggc Gly	cat His	ggg Gly	act Thr	ata Ile 4745	gga Gly	cag Gln	gct Ala	gta Val	34619
gtt Val 4750	gtt Val	cgg Arg	gtg Val	aat Asn	acc Thr 4755	acg Thr	gat Asp	gtg Val	tac Tyr	tct Ser 4760	tat Tyr	atc Ile	gca Ala	tcg Ser	34664
gag Glu 4765	tat Tyr	acc Thr	cac His	cgc Arg	ccc Pro 4770	gat Asp	aac Asn	gta Val	gaa Glu	tcc Ser 4775	caa Gln	tgg Trp	gcc Ala	gct Ala	34709
gca Ala 4780	tta Leu	gtt Val	ttt Phe	ttt Phe	gtc Val 4785	acc Thr	gca Ala	aac Asn	gac Asp	ggg Gly 4790	ccc Pro	gta Val	agc Ser	gaa Glu	34754
gaa Glu 4795	gcg Ala	cta Leu	tct Ser	tcg Ser	gca Ala 4800	gta Val	acg Thr	ctt Leu	ata Ile	tac Tyr 4805	gga Gly	agc Ser	tgt Cys	gat Asp	34799
aca Thr 4810	tat Tyr	ttt Phe	aca Thr	gat Asp	gaa Glu 4815	caa Gln	tat Tyr	tgc Cys	gaa Glu	aaa Lys 4820	ctg Leu	gtt Val	aca Thr	gct Ala	34844
caa Gln 4825	cat His	ccg Pro	ttg Leu	ctt Leu	ctt Leu 4830	tca Ser	cct Pro	cct Pro	aat Asn	tcc Ser 4835	acg Thr	aca Thr	att Ile	gtg Val	34889
ctt Leu 4840	aat Asn	aaa Lys	tcg Ser	tct Ser	ata Ile 4845	gta Val	cct Pro	ctt Leu	cac His	caa Gln 4850	aac Asn	gtt Val	ggg Gly	gaa Glu	34934
agt Ser 4855	gta Val	tcc Ser	ttg Leu	gaa Glu	gca Ala 4860	acc Thr	cta Leu	cat His	tca Ser	acg Thr 4865	tta Leu	acc Thr	aac Asn	acg Thr	34979
gtt Val 4870	gca Ala	ctg Leu	gac Asp	cct Pro	aga Arg 4875	tgt Cys	agt Ser	tac Tyr	agc Ser	gag Glu 4880	gtt Val	gat Asp	cct Pro	tgg Trp	35024
cat His 4885	gcg Ala	gtt Val	cta Leu	gaa Glu	aca Thr 4890	acc Thr	tcg Ser	act Thr	ggg Gly	tct Ser 4895	ggc Gly	gtt Val	ttg Leu	gat Asp	35069
tgt Cys	cgt Arg	cgt Arg	aga Arg	cgc Arg	cgt Arg	cct Pro	tca Ser	tgg Trp	act Thr	cct Pro	cct Pro	tca Ser	agc Ser	gag Glu	35114

4900		4905		4910	
gaa aat tta gct tgt atc	gac gat ggc ttg gta	aat aat aca cat	35159		
Glu Asn Leu Ala Cys Ile	Asp Asp Gly Leu Val	Asn Asn Thr His			
4915	4920	4925			
tcc acg gat aat tta cat	aaa ccc gct aaa aag	gtt ctc aaa ttt	35204		
Ser Thr Asp Asn Leu His	Lys Pro Ala Lys Lys	Val Leu Lys Phe			
4930	4935	4940			
aaa cca act gta gac gtg	ccg gat aaa aca caa	gtg gca cat gta	35249		
Lys Pro Thr Val Asp Val	Pro Asp Lys Thr Gln	Val Ala His Val			
4945	4950	4955			
tta ccc cgc cta cga gaa	gtt gct aac acc cca	gac gtt gtg tta	35294		
Leu Pro Arg Leu Arg Glu	Val Ala Asn Thr Pro	Asp Val Val Leu			
4960	4965	4970			
aat gta tcc aat gta gat	acg cct gaa tcc agt	ccc act ttt tca	35339		
Asn Val Ser Asn Val Asp	Thr Pro Glu Ser Ser	Pro Thr Phe Ser			
4975	4980	4985			
cgg aac atg aat gta gga	agc agt ttg aaa gat	cgg aag cca ttt	35384		
Arg Asn Met Asn Val Gly	Ser Ser Leu Lys Asp	Arg Lys Pro Phe			
4990	4995	5000			
cta ttt gaa cag agt ggt	gat gtc aac atg gtt	gtc gaa aaa cta	35429		
Leu Phe Glu Gln Ser Gly	Asp Val Asn Met Val	Val Glu Lys Leu			
5005	5010	5015			
cta caa cat ggg cat gaa	att agc aat gga tac	gta caa aat gcg	35474		
Leu Gln His Gly His Glu	Ile Ser Asn Gly Tyr	Val Gln Asn Ala			
5020	5025	5030			
gtg ggt acg ttg gat act	gtt att acc ggt cat	aca aat gtt ccc	35519		
Val Gly Thr Leu Asp Thr	Val Ile Thr Gly His	Thr Asn Val Pro			
5035	5040	5045			
att tgg gta aca agg ccc	ttg gtt atg cca gac	gaa aag gat cca	35564		
Ile Trp Val Thr Arg Pro	Leu Val Met Pro Asp	Glu Lys Asp Pro			
5050	5055	5060			
ttg gag ctt ttt att aac	ctc acc att ttg cgt	tta acg gga ttt	35609		
Leu Glu Leu Phe Ile Asn	Leu Thr Ile Leu Arg	Leu Thr Gly Phe			
5065	5070	5075			
gtg gtg gaa aat gga aca	cgt aca cat cat ggt	gct aca agc gtt	35654		
Val Val Glu Asn Gly Thr	Arg Thr His His Gly	Ala Thr Ser Val			
5080	5085	5090			
gta tca gac ttt ata ggt	ccc ctt ggg gaa att	tta aca gga ttt	35699		
Val Ser Asp Phe Ile Gly	Pro Leu Gly Glu Ile	Leu Thr Gly Phe			
5095	5100	5105			
ccc tcc gcc gcg gaa ctt	ata cgc gtt aca agt	ttg ata tta aca	35744		
Pro Ser Ala Ala Glu Leu	Ile Arg Val Thr Ser	Leu Ile Leu Thr			
5110	5115	5120			

aac	atg	ccg	ggg	gcg	gaa	tat	gct	att	aaa	act	gtt	ctc	cgg	aaa	35789
Asn	Met	Pro	Gly	Ala	Glu	Tyr	Ala	Ile	Lys	Thr	Val	Leu	Arg	Lys	
5125					5130					5135					
aaa	tgt	aca	att	ggc	atg	ctc	att	atc	gct	aag	ttt	ggc	cta	gtt	35834
Lys	Cys	Thr	Ile	Gly	Met	Leu	Ile	Ile	Ala	Lys	Phe	Gly	Leu	Val	
5140					5145					5150					
gcc	atg	ccg	gtt	cag	gat	aca	acc	ggc	gct	tta	cat	gcc	gaa	cta	35879
Ala	Met	Arg	Val	Gln	Asp	Thr	Thr	Gly	Ala	Leu	His	Ala	Glu	Leu	
5155					5160					5165					
gat	gtg	tta	gaa	gcg	gat	cta	gga	ggc	tcg	tcg	ccc	ata	gac	ctc	35924
Asp	Val	Leu	Glu	Ala	Asp	Leu	Gly	Gly	Ser	Ser	Pro	Ile	Asp	Leu	
5170					5175					5180					
tat	tct	aga	ctg	tcg	aca	ggc	ctt	ata	agt	ata	cta	aat	tcg	cct	35969
Tyr	Ser	Arg	Leu	Ser	Thr	Gly	Leu	Ile	Ser	Ile	Leu	Asn	Ser	Pro	
5185					5190					5195					
att	att	tct	cat	ccc	gga	ctt	ttt	gcc	gag	ctt	att	cca	acc	cgt	36014
Ile	Ile	Ser	His	Pro	Gly	Leu	Phe	Ala	Glu	Leu	Ile	Pro	Thr	Arg	
5200					5205					5210					
aca	ggg	tcc	ctg	tct	gaa	cga	ata	cgt	ctt	ctt	tgt	gaa	tta	gtc	36059
Thr	Gly	Ser	Leu	Ser	Glu	Arg	Ile	Arg	Leu	Leu	Cys	Glu	Leu	Val	
5215					5220					5225					
tcg	gcc	ccg	gag	aca	cgc	tat	atg	cgt	gaa	cac	acc	gcg	ctt	gtt	36104
Ser	Ala	Arg	Glu	Thr	Arg	Tyr	Met	Arg	Glu	His	Thr	Ala	Leu	Val	
5230					5235					5240					
tct	agt	gta	aag	gct	tta	gag	aat	gca	tta	cgg	tct	acc	cgc	aat	36149
Ser	Ser	Val	Lys	Ala	Leu	Glu	Asn	Ala	Leu	Arg	Ser	Thr	Arg	Asn	
5245					5250					5255					
aaa	att	gat	gcc	att	caa	ata	cca	gaa	gtt	ccc	cag	gaa	ccc	ccg	36194
Lys	Ile	Asp	Ala	Ile	Gln	Ile	Pro	Glu	Val	Pro	Gln	Glu	Pro	Pro	
5260					5265					5270					
gaa	gaa	acc	gac	att	cca	ccc	gaa	gag	tta	att	cgg	cgt	gta	tat	36239
Glu	Glu	Thr	Asp	Ile	Pro	Pro	Glu	Glu	Leu	Ile	Arg	Arg	Val	Tyr	
5275					5280					5285					
gag	ata	cga	tcc	gaa	gtt	aca	atg	cta	ttg	acc	tcg	gct	gtt	aca	36284
Glu	Ile	Arg	Ser	Glu	Val	Thr	Met	Leu	Leu	Thr	Ser	Ala	Val	Thr	
5290					5295					5300					
gaa	tac	ttc	acc	cgc	gga	gtg	tta	tat	agc	aca	cgg	gcc	ttg	atc	36329
Glu	Tyr	Phe	Thr	Arg	Gly	Val	Leu	Tyr	Ser	Thr	Arg	Ala	Leu	Ile	
5305					5310					5315					
gct	gaa	caa	tcc	cct	agg	cgt	ttt	cgg	gtc	gcg	acc	gca	agt	acg	36374
Ala	Glu	Gln	Ser	Pro	Arg	Arg	Phe	Arg	Val	Ala	Thr	Ala	Ser	Thr	
5320					5325					5330					

gca	ccc	att	caa	cgg	ctt	tta	gat	tct	ctt	ccg	gaa	ttc	gac	gct	36419
Ala	Pro	Ile	Gln	Arg	Leu	Leu	Asp	Ser	Leu	Pro	Glu	Phe	Asp	Ala	
5335					5340					5345					
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Lys	Leu	Thr	Ala	Ile	Ile	Ser	Ser	Leu	Ser	Ile	His	Pro	Pro	Pro	
5350					5355					5360					
gag	act	ata	caa	aat	ctc	ccc	gtc	gta	tct	ctg	tta	aaa	gag	ctt	36509
Glu	Thr	Ile	Gln	Asn	Leu	Pro	Val	Val	Ser	Leu	Leu	Lys	Glu	Leu	
5365					5370					5375					
att	aaa	gaa	ggg	gaa	gat	tta	aac	aca	gac	acg	gct	ctc	gta	tcg	36554
Ile	Lys	Glu	Gly	Glu	Asp	Leu	Asn	Thr	Asp	Thr	Ala	Leu	Val	Ser	
5380					5385					5390					
tggt	tta	tct	gta	gtc	ggg	gaa	gct	caa	acc	gca	ggg	tac	tta	tcc	36599
Trp	Leu	Ser	Val	Val	Gly	Glu	Ala	Gln	Thr	Ala	Gly	Tyr	Leu	Ser	
5395					5400					5405					
aga	cga	gag	ttc	gat	gaa	tta	tca	cgt	aca	att	aaa	acc	att	aat	36644
Arg	Arg	Glu	Phe	Asp	Glu	Leu	Ser	Arg	Thr	Ile	Lys	Thr	Ile	Asn	
5410					5415					5420					
aca	cgc	gca	acg	caa	cgg	gct	tcc	gcg	gaa	gca	gag	ttg	tct	tgc	36689
Thr	Arg	Ala	Thr	Gln	Arg	Ala	Ser	Ala	Glu	Ala	Glu	Leu	Ser	Cys	
5425					5430					5435					
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Phe	Asn	Thr	Leu	Ser	Ala	Ala	Val	Asp	Gln	Ala	Val	Lys	Asp	Tyr	
5440					5445					5450					
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Glu	Thr	Tyr	Asn	Asn	Gly	Glu	Val	Lys	Tyr	Pro	Glu	Ile	Thr	Arg	
5455					5460					5465					
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Asp	Asp	Leu	Leu	Ala	Thr	Ile	Val	Arg	Ala	Thr	Asp	Asp	Leu	Val	
5470					5475					5480					
cga	cag	ata	aaa	att	tta	agt	gat	cca	atg	atc	caa	tcc	ggg	tta	36869
Arg	Gln	Ile	Lys	Ile	Leu	Ser	Asp	Pro	Met	Ile	Gln	Ser	Gly	Leu	
5485					5490					5495					
caa	cct	tcg	att	aaa	aga	cga	ttg	gaa	aca	agg	ctt	aaa	gag	gtt	36914
Gln	Pro	Ser	Ile	Lys	Arg	Arg	Leu	Glu	Thr	Arg	Leu	Lys	Glu	Val	
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Gln	Thr	Tyr	Ala	Asn	Glu	Ala	Arg	Thr	Thr	Gln	Asp	Thr	Ile	Lys	
5515					5520					5525					
agt	cga	aaa	cag	gcg	gca	tat	aat	aaa	ctc	ggg	ggg	tta	ctt	cgc	37004
Ser	Arg	Lys	Gln	Ala	Ala	Tyr	Asn	Lys	Leu	Gly	Gly	Leu	Leu	Arg	
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ccg	gta	acc	ggg	ttt	gtg	gga	ctt	agg	gct	gca	gta	gat	tta	tta	37049

Pro 5545	Val	Thr	Gly	Phe	Val 5550	Gly	Leu	Arg	Ala	Ala 5555	Val	Asp	Leu	Leu	
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Pro	Glu	Leu	Ala	Ser	Glu	Leu	Asp	Val	Gln	Gly	Ala	Leu	Val	Asn	
ctc 5575	agg	acc	aaa	gtc	tta 5580	gag	gcg	ccg	gta	gag 5585	atc	cgt	tct	caa	37139
Leu	Arg	Thr	Lys	Val	Leu	Glu	Ala	Pro	Val	Glu	Ile	Arg	Ser	Gln	
ctt 5590	acg	ggt	gat	ttc	tgg 5595	gcg	tta	ttt	aac	caa 5600	tat	cga	gac	att	37184
Leu	Thr	Gly	Asp	Phe	Trp	Ala	Leu	Phe	Asn	Gln	Tyr	Arg	Asp	Ile	
tta 5605	gaa	cat	ccc	gga	aac 5610	gca	cgc	aca	tct	gtc 5615	tta	gga	gga	ctg	37229
Leu	Glu	His	Pro	Gly	Asn	Ala	Arg	Thr	Ser	Val	Leu	Gly	Gly	Leu	
gga 5620	gct	tgt	ttt	aca	gct 5625	att	atc	gaa	att	gtg 5630	ccg	ata	cct	acg	37274
Gly	Ala	Cys	Phe	Thr	Ala	Ile	Ile	Glu	Ile	Val	Pro	Ile	Pro	Thr	
gag 5635	tat	aga	cca	tca	ttg 5640	ctt	gcg	ttt	ttt	ggt 5645	gac	gtg	gca	gat	37319
Glu	Tyr	Arg	Pro	Ser	Leu	Leu	Ala	Phe	Phe	Gly	Asp	Val	Ala	Asp	
gtg 5650	ctt	gca	tcc	gac	atc 5655	gcg	acc	gta	tct	act 5660	aac	ccg	gaa	agt	37364
Val	Leu	Ala	Ser	Asp	Ile	Ala	Thr	Val	Ser	Thr	Asn	Pro	Glu	Ser	
gag 5665	tcc	gcc	ata	aac	gct 5670	gtt	gtt	gca	act	ctt 5675	agt	aaa	gcg	acg	37409
Glu	Ser	Ala	Ile	Asn	Ala	Val	Val	Ala	Thr	Leu	Ser	Lys	Ala	Thr	
tta 5680	gtt	tca	tct	aca	gtg 5685	cca	gcc	tta	tcc	ttt 5690	gtg	ttg	tcg	tta	37454
Leu	Val	Ser	Ser	Thr	Val	Pro	Ala	Leu	Ser	Phe	Val	Leu	Ser	Leu	
tat 5695	aaa	aaa	tat	cag	gct 5700	tta	caa	caa	gaa	att 5705	acg	aat	acc	cat	37499
Tyr	Lys	Lys	Tyr	Gln	Ala	Leu	Gln	Gln	Glu	Ile	Thr	Asn	Thr	His	
aag 5710	ttg	act	gaa	tta	caa 5715	aaa	caa	ctt	gga	gat 5720	gac	ttc	tcc	acc	37544
Lys	Leu	Thr	Glu	Leu	Gln	Lys	Gln	Leu	Gly	Asp	Asp	Phe	Ser	Thr	
cta 5725	gct	gtc	tca	tct	gga 5730	cac	ttg	aag	ttt	ata 5735	tca	tct	tca	aat	37589
Leu	Ala	Val	Ser	Ser	Gly	His	Leu	Lys	Phe	Ile	Ser	Ser	Ser	Asn	
gta 5740	gat	gat	tat	gaa	ata 5745	aac	gat	gcg	ata	tta 5750	tca	ata	caa	aca	37634
Val	Asp	Asp	Tyr	Glu	Ile	Asn	Asp	Ala	Ile	Leu	Ser	Ile	Gln	Thr	
aat 5760	gtg	cac	gcc	cta	atg 5765	gat	acg	gtt	aaa	ctt 5770	gtt	gaa	gtt	gaa	37679
Asn	Val	His	Ala	Leu	Met	Asp	Thr	Val	Lys	Leu	Val	Glu	Val	Glu	

5755		5760		5765	
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Leu	Gln Lys Leu Pro Pro	His Cys Ile Ala Gly	Thr Ser Thr Leu		
5770		5775		5780	
tct	cga gta gta aag gat	ctt cat aaa ctc gtc	aca atg gca cat	37769	
Ser	Arg Val Val Lys Asp	Leu His Lys Leu Val	Thr Met Ala His		
5785		5790		5795	
gag	aag aag gaa cag gca	aaa gtg tta att acc	gat tgt gaa cgt	37814	
Glu	Lys Lys Glu Gln Ala	Lys Val Leu Ile Thr	Asp Cys Glu Arg		
5800		5805		5810	
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Ala	His Lys Gln Gln Thr	Thr Arg Val Leu Tyr	Glu Arg Trp Thr		
5815		5820		5825	
cgt	gat att ata gca tgt	ctg gag gca atg gaa	acg cgc cat ata	37904	
Arg	Asp Ile Ile Ala Cys	Leu Glu Ala Met Glu	Thr Arg His Ile		
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Phe	Asn Gly Thr Glu Leu	Ala Arg Leu Arg Asp	Met Ala Ala Ala		
5845		5850		5855	
gga	ggg ttt gat ata cac	gca gtt tac cca caa	gca cgt cag gtt	37994	
Gly	Gly Phe Asp Ile His	Ala Val Tyr Pro Gln	Ala Arg Gln Val		
5860		5865		5870	
gta	gcg gca tgt gaa act	aca gcc gtt acg gca	tta gat act gtg	38039	
Val	Ala Ala Cys Glu Thr	Thr Ala Val Thr Ala	Leu Asp Thr Val		
5875		5880		5885	
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Phe	Arg His Asn Pro Tyr	Thr Pro Glu Asn Thr	Asn Ile Pro Pro		
5890		5895		5900	
cct	ttg gct ttg tta aga	ggg tta aca tgg ttt	gat gat ttt tcg	38129	
Pro	Leu Ala Leu Leu Arg	Gly Leu Thr Trp Phe	Asp Asp Phe Ser		
5905		5910		5915	
att	acg gct ccc gta ttc	acc gtt atg ttt cca	ggg gtt agt att	38174	
Ile	Thr Ala Pro Val Phe	Thr Val Met Phe Pro	Gly Val Ser Ile		
5920		5925		5930	
gag	gga ctc ctt ctg ctt	atg cgt att cgc gcg	gtt gtg tta tta	38219	
Glu	Gly Leu Leu Leu Leu	Met Arg Ile Arg Ala	Val Val Leu Leu		
5935		5940		5945	
tcc	gcc gat acg tct att	aat gga ata cct aac	tac cga gat atg	38264	
Ser	Ala Asp Thr Ser Ile	Asn Gly Ile Pro Asn	Tyr Arg Asp Met		
5950		5955		5960	
ata	tta cga acc tcg ggg	gat cta tta caa ata	ccc gca ttg gct	38309	
Ile	Leu Arg Thr Ser Gly	Asp Leu Leu Gln Ile	Pro Ala Leu Ala		
5965		5970		5975	

ggg Gly 5980	tat Tyr	gtt Val	gat Asp	ttt Phe	tac Tyr 5985	aca Thr	cgg Arg	tct Ser	tat Tyr	gat Asp 5990	cag Gln	ttt Phe	ata Ile	acc Thr	38354
gaa Glu 5995	agt Ser	gta Val	acg Thr	tta Leu	agt Ser 6000	gaa Glu	ctt Leu	aga Arg	gca Ala	gac Asp 6005	atc Ile	aga Arg	cag Gln	gct Ala	38399
gcc Ala 6010	ggg Gly	gct Ala	aaa Lys	ctt Leu	aca Thr 6015	gaa Glu	gca Ala	aat Asn	aag Lys	gct Ala 6020	ttg Leu	gag Glu	gaa Glu	gta Val	38444
act Thr 6025	cat His	gtt Val	cgg Arg	gca Ala	cac His 6030	gaa Glu	acg Thr	gct Ala	aaa Lys	ctt Leu 6035	gca Ala	ctt Leu	aaa Lys	gaa Glu	38489
ggg Gly 6040	gtc Val	ttc Phe	att Ile	aca Thr	tta Leu 6045	cca Pro	agc Ser	gaa Glu	ggg Gly	tta Leu 6050	ttg Leu	att Ile	cgg Arg	gct Ala	38534
ata Ile 6055	gag Glu	tat Tyr	ttt Phe	aca Thr	act Thr 6060	ttc Phe	gat Asp	cat His	aaa Lys	cga Arg 6065	ttt Phe	ata Ile	gga Gly	acg Thr	38579
gca Ala 6070	tat Tyr	gaa Glu	aga Arg	gtt Val	tta Leu 6075	caa Gln	aca Thr	atg Met	gta Val	gac Asp 6080	cgc Arg	gat Asp	cta Leu	aag Lys	38624
gag Glu 6085	gcc Ala	aac Asn	gca Ala	gag Glu	ctt Leu 6090	gca Ala	cag Gln	ttt Phe	cggt Arg	atg Met 6095	gtg Val	tgt Cys	cag Gln	gca Ala	38669
aca Thr 6100	aag Lys	aac Asn	cggt Arg	gca Ala	ata Ile 6105	caa Gln	att Ile	tta Leu	caa Gln	aac Asn 6110	att Ile	gtt Val	gat Asp	acg Thr	38714
gcc Ala 6115	aat Asn	gcc Ala	act Thr	gag Glu	caa Gln 6120	caa Gln	gaa Glu	gac Asp	gtg Val	gat Asp 6125	ttc Phe	act Thr	aac Asn	ctg Leu	38759
aag Lys 6130	acg Thr	tta Leu	tta Leu	aaa Lys	cta Leu 6135	acc Thr	ccc Pro	cct Pro	ccc Pro	aaa Lys 6140	aca Thr	att Ile	gca Ala	ttg Leu	38804
gcc Ala 6145	att Ile	gat Asp	aga Arg	tct Ser	act Thr 6150	tcc Ser	gtt Val	cag Gln	gac Asp	att Ile 6155	gtc Val	acg Thr	cag Gln	ttt Phe	38849
gca Ala 6160	ttg Leu	ctg Leu	tta Leu	ggg Gly	cggt Arg 6165	ctg Leu	gaa Glu	gaa Glu	gaa Glu	act Thr 6170	ggg Gly	acg Thr	ttg Leu	gac Asp	38894
att Ile 6175	cag Gln	gcg Ala	gtt Val	gac Asp	tgg Trp 6180	atg Met	tac Tyr	caa Gln	gct Ala	cgc Arg 6185	aat Asn	att Ile	att Ile	gac Asp	38939

tcc Ser 6190	cat His 6190	cca Pro 6190	cta Leu 6190	agt Ser 6190	gtg Val 6195	cgt Arg 6195	ata Ile 6195	gac Asp 6195	ggt Gly 6200	acc Thr 6200	ggc Gly 6200	ccc Pro 6200	ctg Leu 6200	cat His 6200	38984
act Thr 6205	tat Tyr 6205	aaa Lys 6205	gat Asp 6205	agg Arg 6210	gtg Val 6210	gat Asp 6210	aaa Lys 6210	ctt Leu 6210	tat Tyr 6215	gcg Ala 6215	tta Leu 6215	cga Arg 6215	act Thr 6215	aaa Lys 6215	39029
tta Leu 6220	gat Asp 6220	ctc Leu 6220	cta Leu 6220	cga Arg 6225	cga Arg 6225	cga Arg 6225	ata Ile 6225	gaa Glu 6230	acc Thr 6230	ggt Gly 6230	gag Glu 6230	gtt Val 6230	acg Thr 6230	tgg Trp 6230	39074
gac Asp 6235	gat Asp 6235	gca Ala 6235	tgg Trp 6235	aca Thr 6240	aca Thr 6240	ttt Phe 6240	aaa Lys 6240	aga Arg 6245	gaa Glu 6245	acg Thr 6245	ggg Gly 6245	gat Asp 6245	atg Met 6245	ttg Leu 6245	39119
gca Ala 6250	tcg Ser 6250	ggg Gly 6250	gac Asp 6250	acg Thr 6255	tac Tyr 6255	gct Ala 6255	act Thr 6255	tcc Ser 6260	gta Val 6260	gat Asp 6260	agt Ser 6260	ata Ile 6260	aag Lys 6260	gca Ala 6260	39164
ctc Leu 6265	cag Gln 6265	gca Ala 6265	tcg Ser 6265	gcg Ala 6270	tct Ser 6270	gtg Val 6270	gtt Val 6270	gac Asp 6275	atg Met 6275	ctt Leu 6275	tgt Cys 6275	tcc Ser 6275	gaa Glu 6275	ccc Pro 6275	39209
gaa Glu 6280	ttt Phe 6280	ttt Phe 6280	tta Leu 6285	ttg Leu 6285	cct Pro 6285	gtg Val 6290	gaa Glu 6290	acg Thr 6290	aaa Lys 6290	aac Asn 6290	cgt Arg 6290	ctc Leu 6290	caa Gln 6290	aaa Lys 6290	39254
aag Lys 6295	caa Gln 6295	cag Gln 6295	gaa Glu 6300	cgt Arg 6300	aaa Lys 6300	acg Thr 6305	gcg Ala 6305	ttg Leu 6305	gat Asp 6305	gtt Val 6305	gtg Val 6305	ttg Leu 6305	caa Gln 6305	aaa Lys 6305	39299
caa Gln 6310	aga Arg 6310	cag Gln 6310	ttt Phe 6315	gaa Glu 6315	gag Glu 6315	acc Thr 6320	gcg Ala 6320	tct Ser 6320	cgc Arg 6320	tta Leu 6320	cga Arg 6320	gct Ala 6320	tta Leu 6320	att Ile 6320	39344
gaa Glu 6325	cgt Arg 6325	att Ile 6325	cca Pro 6330	acg Thr 6330	gag Glu 6330	agt Ser 6335	gac Asp 6335	cat His 6335	gac Asp 6335	gtt Val 6335	ctt Leu 6335	cgt Arg 6335	atg Met 6335	tta Leu 6335	39389
tta Leu 6340	cgt Arg 6340	gat Asp 6345	ttc Phe 6345	gat Asp 6345	caa Gln 6345	ttt Phe 6350	aca Thr 6350	cat His 6350	ttg Leu 6350	cct Pro 6350	ata Ile 6350	tgg Trp 6350	ata Ile 6350	aaa Lys 6350	39434
aca Thr 6355	cag Gln 6355	tat Tyr 6360	atg Met 6360	aca Thr 6360	ttt Phe 6360	cga Arg 6365	aat Asn 6365	tta Leu 6365	ctc Leu 6365	atg Met 6365	gta Val 6365	cgg Arg 6365	tta Leu 6365	ggc Gly 6365	39479
ttg Leu 6370	tat Tyr 6370	gca Ala 6375	agt Ser 6375	tat Tyr 6375	gct Ala 6375	gag Glu 6380	att Ile 6380	ttt Phe 6380	cca Pro 6380	ccc Pro 6380	gcg Ala 6380	tct Ser 6380	cca Pro 6380	aac Asn 6380	39524
gga Gly 6385	gta Val 6385	ttt Phe 6390	gct Ala 6390	cct Pro 6390	att Ile 6390	ccc Pro 6395	gcc Ala 6395	atg Met 6395	tcg Ser 6395	ggt Gly 6395	gta Val 6395	tgt Cys 6395	cta Leu 6395	gaa Glu 6395	39569
gac 63614	caa 63614	tcc 63614	cga 63614	tgc 63614	att 63614	cgc 63614	gcg 63614	cgg 63614	gtg 63614	gcc 63614	gcg 63614	ttt 63614	atg 63614	ggg 63614	39614

Asp 6400	Gln	Ser	Arg	Cys	Ile 6405	Arg	Ala	Arg	Val	Ala 6410	Ala	Phe	Met	Gly	
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gac 6430	gct Ala	ttg Leu	ttt Phe	gga Gly	aaa Lys 6435	aat Asn	tta Leu	acc Thr	ttt Phe	tac Tyr 6440	ttg Leu	gat Asp	act Thr	gat Asp	39704
ggg 6445	gtt Val	cca Pro	ctt Leu	cga Arg	tat Tyr 6450	aga Arg	gtg Val	tgt Cys	tat Tyr	aaa Lys 6455	tca Ser	gtt Val	ggg Gly	gtt Val	39749
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ccg 6475	gca Ala	ctt Leu	ccc Pro	gat Asp	gaa Glu 6480	ggg Gly	att Ile	gtg Val	gaa Glu	gaa Glu 6485	act Thr	aca Thr	cta Leu	tcg Ser	39839
gca 6490	tta Leu	cgc Arg	gtg Val	gcc Ala	aat Asn 6495	gag Glu	gtc Val	aat Asn	gag Glu	cta Leu 6500	cgc Arg	att Ile	gaa Glu	tac Tyr	39884
gaa 6505	tcc Ser	gct Ala	ata Ile	aaa Lys	tcc Ser 6510	ggg Gly	ttt Phe	tct Ser	gcc Ala	ttt Phe 6515	tcc Ser	acc Thr	ttt Phe	gtt Val	39929
agg 6520	cat His	cgc Arg	cac His	gcc Ala	gaa Glu 6525	tgg Trp	ggg Gly	aaa Lys	acc Thr	aac Asn 6530	gca Ala	cgc Arg	aga Arg	gcc Ala	39974
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caa 6550	tac Tyr	ggg Gly	ggt Val	cat His	tgg Trp 6555	gac Asp	aag Lys	ctt Leu	att Ile	tat Tyr 6560	tct Ser	ttt Phe	gaa Glu	aaa Lys	40064
cac 6565	cac His	cta Leu	act Thr	tct Ser	gta Val 6570	atg Met	ggc Gly	aat Asn	gga Gly	cta Leu 6575	act Thr	aaa Lys	cca Pro	atc Ile	40109
cag 6580	aga Arg	agg Arg	ggg Gly	gat Asp	gta Val 6585	cgc Arg	gta Val	tta Leu	gag Glu	tta Leu 6590	acc Thr	cta Leu	tct Ser	gat Asp	40154
att 6595	gta Val	act Thr	att Ile	ttg Leu	ggt Val 6600	gcc Ala	aca Thr	acc Thr	ccg Pro	gta Val 6605	cat His	ctt Leu	ctc Leu	aat Asn	40199
ttt 6605	gct Ala	aga Arg	ttg Leu	gat Asp	tta Leu	att Ile	aaa Lys	cag Gln	cat His	gag Glu	tat Tyr	atg Met	gcc Ala	cgt Arg	40244

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Thr	Leu	Arg	Pro	Val	Ile
6625					6630
ggt	cgt	tta	ctc		
Gly	Arg	Leu	Leu		
6635					
40289					
ggt	cgc	tca	ttg	gat	gga
Val	Arg	Ser	Leu	Asp	Gly
6640					6645
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Asp	Pro	Lys	Gly	Asn	Ala
6650					
40334					
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Phe	Asn	Ala	Ala	Pro	Ser
6655					6660
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Lys	His	Lys	Leu	Pro	Leu
6665					
40379					
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Ser	Asn	Gln	Asp	Pro	Thr
6670					6675
ggc	ggg	aga	ata	ttt	gca
Gly	Gly	Arg	Ile	Phe	Ala
6680					
40424					
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Ala	Asp	Trp	Lys	Leu	Val
6685					6690
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Lys	Met	Pro	Gln	Lys	Ile
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40469					
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Phe	Ala	Pro	Trp	Gln	Leu
6700					6705
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Ser	Pro	Pro	Pro	Gly	Val
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Val	Asp	Ala	Val	Thr	Arg
6715					6720
ata	atg	gca	aca	gat	cgt
Ile	Met	Ala	Thr	Asp	Arg
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atg	tgt	ctc	ccg	cca	att
Met	Cys	Leu	Pro	Pro	Ile
6740					
40604					
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Ser	Met	Trp	Asn	Thr	Leu
6745					6750
caa	ccg	gag	gaa	ttc	gca
Gln	Pro	Glu	Glu	Phe	Ala
6755					
40649					
caa	gat	gat	gtg	gac	att
Gln	Asp	Asp	Val	Asp	Ile
6760					6765
ata	ggt	gat	gag	aga	ctg
Ile	Val	Asp	Ala	Arg	Leu
6770					
40694					
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Ser	Thr	Leu	Asn	Ala	Arg
6775					6780
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Phe	Asp	Thr	Ala	Pro	Ser
6785					
40739					
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Leu	Glu	Trp	Asn	Thr	Asp
6790					6795
cgt	aaa	gta	att	aca	gat
Arg	Lys	Val	Ile	Thr	gct
6800					
40784					
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Gln	Thr	Gly	Ala	Thr	Thr
6805					6810
ggt	ttt	aca	gta	acg	ggg
Val	Phe	Thr	Val	Thr	Gly
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40829					
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Thr	His	Val	Ser	Asn	Val
6820					6825
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Thr	Ala	Phe	Asp	Ile	Ala
6830					
40874					

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Ile	Leu	Phe	Gly	Ala	Pro	Leu	Val	Ile	Ala	Met	Glu	Leu	Thr	Ser	
6835					6840					6845					
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Val	Phe	Ser	Gln	Asn	Ser	Gly	Leu	Thr	Leu	Gly	Leu	Lys	Leu	Phe	
6850					6855					6860					
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6865					6870					6875					
tct	ccc	gat	att	ggt	tct	tgg	ggg	tta	cgt	tta	ctg	cat	atg	gat	41054
Ser	Pro	Asp	Ile	Val	Ser	Trp	Gly	Leu	Arg	Leu	Leu	His	Met	Asp	
6880					6885					6890					
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Pro	His	Pro	Ile	Glu	Asn	Ala	Cys	Leu	Ile	Val	Gln	Leu	Glu	Lys	
6895					6900					6905					
ctg	tcc	gcg	ctc	att	gca	aac	aaa	cct	ctt	aca	aac	aat	ccc	ccg	41144
Leu	Ser	Ala	Leu	Ile	Ala	Asn	Lys	Pro	Leu	Thr	Asn	Asn	Pro	Pro	
6910					6915					6920					
tgt	tta	ctg	cta	ttg	gac	gaa	cat	atg	aat	ccc	tct	tat	ggt	tta	41189
Cys	Leu	Leu	Leu	Leu	Asp	Glu	His	Met	Asn	Pro	Ser	Tyr	Val	Leu	
6925					6930					6935					
tgg	gaa	cga	aaa	gac	tcg	att	cca	gct	ccg	gat	tat	gtg	gtc	ttt	41234
Trp	Glu	Arg	Lys	Asp	Ser	Ile	Pro	Ala	Pro	Asp	Tyr	Val	Val	Phe	
6940					6945					6950					
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Trp	Gly	Pro	Glu	Ser	Leu	Ile	Asp	Leu	Pro	Tyr	Ile	Asp	Ser	Asp	
6955					6960					6965					
gag	gac	tct	ttc	ccc	tcg	tgt	ccc	gat	gat	cca	ttt	tac	tcg	caa	41324
Glu	Asp	Ser	Phe	Pro	Ser	Cys	Pro	Asp	Asp	Pro	Phe	Tyr	Ser	Gln	
6970					6975					6980					
att	att	gcc	ggt	tat	gcg	ccc	caa	ggc	ccc	cca	aac	ctc	gac	aca	41369
Ile	Ile	Ala	Gly	Tyr	Ala	Pro	Gln	Gly	Pro	Pro	Asn	Leu	Asp	Thr	
6985					6990					6995					
act	gat	ttt	tac	cca	acg	gag	cca	cta	ttt	aag	tct	ccc	ggt	caa	41414
Thr	Asp	Phe	Tyr	Pro	Thr	Glu	Pro	Leu	Phe	Lys	Ser	Pro	Val	Gln	
7000					7005					7010					
ggt	ggt	aga	agt	tcc	aaa	tgt	aaa	aaa	atg	ccc	gtc	cgg	ccc	gcg	41459
Val	Val	Arg	Ser	Ser	Lys	Cys	Lys	Lys	Met	Pro	Val	Arg	Pro	Ala	
7015					7020					7025					
cag	ccc	gcg	cag	ccc	gcg	cag	ccc	gcg	cag	ccc	gcg	cag	acc	gtc	41504
Gln	Pro	Ala	Gln	Pro	Ala	Gln	Pro	Ala	Gln	Pro	Ala	Gln	Thr	Val	
7030					7035					7040					

cag Gln 7045	ccc Pro	gcg Ala	cag Gln	ccc Pro	ata Ile 7050	gaa Glu	ccg Pro	ggc Gly	aca Thr	caa Gln 7055	ata Ile	gtg Val	gta Val	caa Gln	41549
aat Asn 7060	ttt Phe	aag Lys	aaa Lys	ccc Pro	caa Gln 7065	agc Ser	gta Val	aaa Lys	aca Thr	acc Thr 7070	ctt Leu	agc Ser	caa Gln	aaa Lys	41594
gat Asp 7075	att Ile	ccc Pro	ttg Leu	tat Tyr	gtg Val 7080	gaa Glu	acc Thr	gaa Glu	tca Ser	gaa Glu 7085	acg Thr	gct Ala	gtg Val	ctt Leu	41639
ata Ile 7090	cct Pro	aag Lys	caa Gln	tta Leu	acc Thr 7095	acc Thr	tcc Ser	att Ile	aaa Lys	aca Thr 7100	acc Thr	ggt Val	tgt Cys	aaa Lys	41684
agt Ser 7105	att Ile	acc Thr	cca Pro	cca Pro	aat Asn 7110	aac Asn	caa Gln	ttg Leu	tcg Ser	gat Asp 7115	tgg Trp	aaa Lys	aat Asn	aat Asn	41729
cca Pro 7120	cag Gln	caa Gln	aac Asn	caa Gln	acg Thr 7125	tta Leu	aac Asn	caa Gln	gcg Ala	ttc Phe 7130	agt Ser	aaa Lys	cca Pro	ata Ile	41774
ctt Leu 7135	gag Glu	att Ile	acc Thr	tcc Ser	att Ile 7140	ccg Pro	aca Thr	gat Asp	gac Asp	tcg Ser 7145	ata Ile	tct Ser	tac Tyr	cg Arg	41819
act Thr 7150	tgg Trp	att Ile	gaa Glu	aaa Lys	tca Ser 7155	aat Asn	caa Gln	aca Thr	caa Gln	aaa Lys 7160	cg Arg	cat His	caa Gln	aat Asn	41864
gac Asp 7165	cct Pro	cga Arg	atg Met	tat Tyr	aac Asn 7170	tcc Ser	aaa Lys	aca Thr	gta Val	ttc Phe 7175	cac His	cct Pro	gta Val	aat Asn	41909
aac Asn 7180	caa Gln	tta Leu	cct Pro	tct Ser	tgg Trp 7185	gtt Val	gac Asp	acg Thr	gca Ala	gcc Ala 7190	gat Asp	gcc Ala	ccc Pro	caa Gln	41954
acg Thr 7195	gac Asp	cta Leu	ttg Leu	aca Thr	aac Asn 7200	tat Tyr	aaa Lys	aca Thr	aga Arg	cag Gln 7205	ccg Pro	tcg Ser	cca Pro	aac Asn	41999
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aac Asn 7225	tca Ser	ccg Pro	aac Asn	aga Arg	gac Asp 7230	cta Leu	tat Tyr	caa Gln	agt Ser	gat Asp 7235	ttt Phe	agt Ser	gaa Glu	cct Pro	42089
tct Ser 7240	gac Asp	ggc Gly	tat Tyr	agc Ser	agt Ser 7245	gag Glu	agt Ser	gaa Glu	aat Asn	tct Ser 7250	atc Ile	gta Val	cta Leu	agt Ser	42134
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Ala	Leu	Gly	Ala	Leu	Ala	Leu	Leu	Ser	Gln	Ala	Cys	Arg	Arg	Met	
7285					7290					7295					
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7315					7320					7325					
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					7335	
cgg gta gaa tca gaa	gaa ccc atg gat gga	ttc gaa tcg ccc gta				44556
Arg Val Glu Ser Glu	Glu Pro Met Asp Gly	Phe Glu Ser Pro Val				
	7340	7345			7350	
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Phe Ser Glu Asn Thr	Ser Ser Asn Ser Gly	Trp Cys Ser Asp Ala				
	7355	7360			7365	
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Phe Ser Asp Ser Tyr	Ile Ala Tyr Asn Pro	Ala Leu Leu Leu Lys				
	7370	7375			7380	
aac gat ttg tta ttt	tca gaa ttg tta ttt	gcc tcc cac tta ata				44691
Asn Asp Leu Leu Phe	Ser Glu Leu Leu Phe	Ala Ser His Leu Ile				
	7385	7390			7395	
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Asn Val Pro Arg Ala	Ile Glu Asn Asn Val	Thr Tyr Glu Ala Ser				
	7400	7405			7410	

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Ser Ala Val Gly Val Asp Asn Glu Met Thr Ser Ser Thr Thr Glu	
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Phe Ile Glu Glu Ile Gly Asp Val Leu Ala Leu Asp Arg Ala Cys	
7430 7435 7440	
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Leu Val Cys Arg Thr Leu Asp Leu Tyr Lys Arg Lys Phe Gly Leu	
7445 7450 7455	
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Thr Pro Glu Trp Val Ala Asp Tyr Ala Met Leu Cys Met Lys Ser	
7460 7465 7470	
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Leu Ala Ser Pro Pro Cys Ala Val Val Thr Phe Ser Ala Ala Phe	
7475 7480 7485	
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Glu Phe Val Tyr Leu Met Asp Arg Tyr Tyr Leu Cys Arg Tyr Asn	
7490 7495 7500	
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Val Thr Leu Val Gly Ser Phe Ala Arg Arg Thr Leu Ser Leu Leu	
7505 7510 7515	
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Asp Ile Gln Arg His Phe Phe Leu His Val Cys Phe Arg Thr Asp	
7520 7525 7530	
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Gly Gly Leu Pro Gly Ile Arg Pro Pro Pro Gly Lys Glu Met Ala	
7535 7540 7545	
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Asn Lys Val Arg Tyr Ser Asn Tyr Ser Phe Phe Val Gln Ala Val	
7550 7555 7560	
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Val Arg Ala Ala Leu Leu Ser Ile Ser Thr Ser Arg Leu Asp Glu	
7565 7570 7575	
acc gaa acg cgt aag tca ttt tac ttt aat cag gac gga ctg act	45276
Thr Glu Thr Arg Lys Ser Phe Tyr Phe Asn Gln Asp Gly Leu Thr	
7580 7585 7590	
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Gly Gly Pro Gln Pro Leu Ala Ala Ala Leu Ala Asn Trp Lys Asp	
7595 7600 7605	
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Cys Ala Arg Met Val Asp Cys Ser Ser Ser Glu His Arg Thr Ser	
7610 7615 7620	

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Gly Met Ile Thr Cys	Ala Glu Arg Ala Leu	Lys Glu Asp Ile Glu	
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Phe Glu Asp Ile Leu	Ile Asp Lys Leu Lys	Lys Ser Ser Tyr Val	
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Glu Ala Ala Trp Gly	Tyr Ala Asp Leu Ala	Leu Leu Leu Leu Ser	
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Gly Val Ala Thr Trp	Asn Val Asp Glu Arg	Thr Asn Cys Ala Ile	
7670	7675	7680	
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Glu Thr Arg Val Gly	Cys Val Lys Ser Tyr	Trp Gln Ala Asn Arg	
7685	7690	7695	
att gaa aac tcc agg	gac gtt cca aaa caa	ttt tcc aaa ttt acg	45636
Ile Glu Asn Ser Arg	Asp Val Pro Lys Gln	Phe Ser Lys Phe Thr	
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agc gag gat gcc tgt	ccc gaa gta gca ttt	ggg cct att ttg tta	45681
Ser Glu Asp Ala Cys	Pro Glu Val Ala Phe	Gly Pro Ile Leu Leu	
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Thr Thr Leu Lys Asn	Ala Lys Cys Arg Gly	Arg Thr Asn Thr Glu	
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Cys Met Leu Cys Cys	Leu Leu Thr Ile Gly	His Tyr Trp Ile Ala	
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Leu Arg Gln Phe Lys	Arg Asp Ile Leu Ala	Tyr Ser Ala Asn Asn	
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Thr Ser Leu Phe Asp	Cys Ile Glu Pro Val	Ile Asn Ala Trp Ser	
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Leu Asp Asn Pro Ile	Lys Leu Lys Phe Pro	Phe Asn Asp Glu Gly	
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Arg Phe Ile Thr Ile	Val Lys Ala Ala Gly	Ser Glu Ala Val Tyr	
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Lys His Leu Phe Cys	Asp Leu Leu Cys Ala	Leu Ser Glu Leu Gln	
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Leu 9095	Lys	Arg	Pro	Pro	Glu 9100	Asp	Asp	Glu	Leu	Phe 9105	Asp	Leu	Ser	Gly	
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Ile 9110	Pro	Ile	Lys	His	Gly 9115	Asn	Ile	Thr	Met	Glu 9120	Met	Ile			
cctccctctt	tatccaatta	aagcccacac	gcgggtgagt	gtacgtaata	aacaagtcaa										54531
tattacatat	tctgttgtgt	tttctttttt	tgtgtgtagt	ccttaccat	atgacctgta										54591
atatagtgtg	tctccaacca	ttcagcttac	agtccagtgg	acagtaacag	cccgataac										54650
atg	gaa	ttg	gat	att	aat	cga	aca	ttg	ttg	gtt	cta	ctg	ggg	caa	54695
Met	Glu	Leu	Asp	Ile	Asn	Arg	Thr	Leu	Leu	Val	Leu	Leu	Gly	Gln	
		9125					9130						9135		
gtt	tat	acg	tac	atc	ttt	cag	gtt	gaa	ctg	cta	cgt	cga	tgt	gat	54740
Val	Tyr	Thr	Tyr	Ile	Phe	Gln	Val	Glu	Leu	Leu	Arg	Arg	Cys	Asp	
		9140					9145						9150		

cca agg gtg gcg tgt cgc ttt tta tat cgg tta gcg gct aac tgt	54785
Pro Arg Val Ala Cys Arg Phe Leu Tyr Arg Leu Ala Ala Asn Cys	
9155 9160 9165	
ttg aca gtt cgt tat tta tta aag ctg ttt ctc cgg gga ttt aat	54830
Leu Thr Val Arg Tyr Leu Leu Lys Leu Phe Leu Arg Gly Phe Asn	
9170 9175 9180	
acc cag cta aaa ttt gga aac act ccc acg gtt tgt gca ctg cat	54875
Thr Gln Leu Lys Phe Gly Asn Thr Pro Thr Val Cys Ala Leu His	
9185 9190 9195	
tgg gca tta tgt tat gta aag gga gaa ggt gag cgt ttg ttt gag	54920
Trp Ala Leu Cys Tyr Val Lys Gly Glu Gly Glu Arg Leu Phe Glu	
9200 9205 9210	
ttg cta caa cat ttt aaa acg cgt ttt gtt tat ggt gag act aaa	54965
Leu Leu Gln His Phe Lys Thr Arg Phe Val Tyr Gly Glu Thr Lys	
9215 9220 9225	
gac tca aac tgt atc aaa gat tac ttt gtc tca gcg ttt aac tta	55010
Asp Ser Asn Cys Ile Lys Asp Tyr Phe Val Ser Ala Phe Asn Leu	
9230 9235 9240	
aaa acc tgc caa tat cac cat gag ctg tcg tta aca aca tac gga	55055
Lys Thr Cys Gln Tyr His His Glu Leu Ser Leu Thr Thr Tyr Gly	
9245 9250 9255	
ggg tac gta tcg agt gaa att cag ttt tta cac gac att gag aat	55100
Gly Tyr Val Ser Ser Glu Ile Gln Phe Leu His Asp Ile Glu Asn	
9260 9265 9270	
ttt tta aaa cag ctt aat tac tgc tat att atc acg tct tct cgt	55145
Phe Leu Lys Gln Leu Asn Tyr Cys Tyr Ile Ile Thr Ser Ser Arg	
9275 9280 9285	
gag gcg cta aac aca ttg gaa acc gtg acg cgg ttt atg aca gat	55190
Glu Ala Leu Asn Thr Leu Glu Thr Val Thr Arg Phe Met Thr Asp	
9290 9295 9300	
act ata gga agc ggt cta ata cca ccc gtg gag ttg ttt gat ccg	55235
Thr Ile Gly Ser Gly Leu Ile Pro Pro Val Glu Leu Phe Asp Pro	
9305 9310 9315	
gcg cat cca tgt gct ata tgt ttt gaa gaa tta tgt ata aca gct	55280
Ala His Pro Cys Ala Ile Cys Phe Glu Glu Leu Cys Ile Thr Ala	
9320 9325 9330	
aac caa ggt gag acc tta cat cgt aga tta tta gga tgt atc tgc	55325
Asn Gln Gly Glu Thr Leu His Arg Arg Leu Leu Gly Cys Ile Cys	
9335 9340 9345	
gat cac gtt act aag caa gtt cgg gtt aac gtg gat gtt gac gat	55370
Asp His Val Thr Lys Gln Val Arg Val Asn Val Asp Val Asp Asp	
9350 9355 9360	
att att cgg tgt tta cca tat atc cct gat gta ccg gat atc aaa	55415

Ile	Ile	Arg	Cys	Leu	Pro	Tyr	Ile	Pro	Asp	Val	Pro	Asp	Ile	Lys	
		9365					9370					9375			
cgt	caa	tcc	gcc	gtt	gaa	gcg	tta	cga	aca	ctt	caa	acc	aag	acg	55460
Arg	Gln	Ser	Ala	Val	Glu	Ala	Leu	Arg	Thr	Leu	Gln	Thr	Lys	Thr	
		9380					9385					9390			
gta	gtc	aat	ccc	atg	gga	gca	aag	aac	gat	acg	ttt	gac	caa	aca	55505
Val	Val	Asn	Pro	Met	Gly	Ala	Lys	Asn	Asp	Thr	Phe	Asp	Gln	Thr	
		9395					9400					9405			
tac	gaa	att	gcg	agc	acc	atg	ctt	gat	tct	tat	aat	gtt	ttt	aaa	55550
Tyr	Glu	Ile	Ala	Ser	Thr	Met	Leu	Asp	Ser	Tyr	Asn	Val	Phe	Lys	
		9410					9415					9420			
cct	gcc	cct	cgg	tgt	atg	tac	gcc	atc	agc	gag	ctt	aaa	ttc	tgg	55595
Pro	Ala	Pro	Arg	Cys	Met	Tyr	Ala	Ile	Ser	Glu	Leu	Lys	Phe	Trp	
		9425					9430					9435			
tta	acg	tct	aat	tcc	act	gaa	gga	ccc	caa	cgt	act	tta	gac	gtg	55640
Leu	Thr	Ser	Asn	Ser	Thr	Glu	Gly	Pro	Gln	Arg	Thr	Leu	Asp	Val	
		9440					9445					9450			
ttt	gtt	gat	aat	ttg	gat	gta	tta	aac	gaa	cat	gaa	aaa	cac	gca	55685
Phe	Val	Asp	Asn	Leu	Asp	Val	Leu	Asn	Glu	His	Glu	Lys	His	Ala	
		9455					9460					9465			
gaa	ctt	aca	gcc	gta	acg	gtt	gag	ttg	gcg	tta	ttt	gga	aaa	act	55730
Glu	Leu	Thr	Ala	Val	Thr	Val	Glu	Leu	Ala	Leu	Phe	Gly	Lys	Thr	
		9470					9475					9480			
ccc	ata	cac	ttt	gat	agg	gcg	ttt	tct	gaa	gaa	ctc	gga	tct	ctg	55775
Pro	Ile	His	Phe	Asp	Arg	Ala	Phe	Ser	Glu	Glu	Leu	Gly	Ser	Leu	
		9485					9490					9495			
gat	gca	att	gat	agt	att	ttg	gtt	ggc	aat	cgc	tca	tcc	tca	cca	55820
Asp	Ala	Ile	Asp	Ser	Ile	Leu	Val	Gly	Asn	Arg	Ser	Ser	Ser	Pro	
		9500					9505					9510			
gac	agt	cag	ata	gaa	gca	tta	att	aaa	gcc	tgt	tat	gcc	cat	cat	55865
Asp	Ser	Gln	Ile	Glu	Ala	Leu	Ile	Lys	Ala	Cys	Tyr	Ala	His	His	
		9515					9520					9525			
cta	tcg	tcg	cct	ctc	atg	cgt	cac	att	tct	aac	ccg	agt	cat	gat	55910
Leu	Ser	Ser	Pro	Leu	Met	Arg	His	Ile	Ser	Asn	Pro	Ser	His	Asp	
		9530					9535					9540			
aac	gaa	gcc	gcc	tta	cgc	caa	ctt	tta	gaa	aga	gtt	ggg	tgt	gag	55955
Asn	Glu	Ala	Ala	Leu	Arg	Gln	Leu	Leu	Glu	Arg	Val	Gly	Cys	Glu	
		9545					9550					9555			
gat	gat	tta	acc	aaa	gag	gcg	agt	gac	agc	gct	aca	gca	tcc	gaa	56000
Asp	Asp	Leu	Thr	Lys	Glu	Ala	Ser	Asp	Ser	Ala	Thr	Ala	Ser	Glu	
		9560					9565					9570			
tgt	gat	ctg	aac	gat	gat	agt	agc	ata	act	ttt	gct	gtt	cat	gga	56045
Cys	Asp	Leu	Asn	Asp	Asp	Ser	Ser	Ile	Thr	Phe	Ala	Val	His	Gly	

9575	9580	9585	
tgg gaa aac ctg tta tcc aaa gca	aaa att gac gct gcg gaa aga	56090	
Trp Glu Asn Leu Leu Ser Lys Ala	Lys Ile Asp Ala Ala Glu Arg		
9590	9595	9600	
aaa cga gta tat ctt gaa cat ctg	tct aag cgc tct cta acc agc	56135	
Lys Arg Val Tyr Leu Glu His Leu	Ser Lys Arg Ser Leu Thr Ser		
9605	9610	9615	
ctc ggt aga tgt atc cgc gaa cag	cgc caa gag cta gaa aaa aca	56180	
Leu Gly Arg Cys Ile Arg Glu Gln	Arg Gln Glu Leu Glu Lys Thr		
9620	9625	9630	
ctc agg gta aac gtt tat gga gag	gcc tta ttg cag aca ttt gtt	56225	
Leu Arg Val Asn Val Tyr Gly Glu	Ala Leu Leu Gln Thr Phe Val		
9635	9640	9645	
tcg atg caa aat ggg ttt ggg gca	cga aac gtg ttt tta gct aag	56270	
Ser Met Gln Asn Gly Phe Gly Ala	Arg Asn Val Phe Leu Ala Lys		
9650	9655	9660	
gtt tcc cag gca ggg tgt att atc	gac aat cgc att cag gaa gcg	56315	
Val Ser Gln Ala Gly Cys Ile Ile	Asp Asn Arg Ile Gln Glu Ala		
9665	9670	9675	
gcc ttt gat gca cat aga ttt ata	agg aat acc tta gtt cga cat	56360	
Ala Phe Asp Ala His Arg Phe Ile	Arg Asn Thr Leu Val Arg His		
9680	9685	9690	
aca gta gat gcg gct atg tta cct	gca ctt aca cat aaa ttt ttt	56405	
Thr Val Asp Ala Ala Met Leu Pro	Ala Leu Thr His Lys Phe Phe		
9695	9700	9705	
gag ttg gtc aac ggc cca ttg ttt	aat cac gat gaa cac cgt ttt	56450	
Glu Leu Val Asn Gly Pro Leu Phe	Asn His Asp Glu His Arg Phe		
9710	9715	9720	
gca caa ccc cct aac acc gcc tta	ttt ttt acc gtg gaa aac gtt	56495	
Ala Gln Pro Pro Asn Thr Ala Leu	Phe Phe Thr Val Glu Asn Val		
9725	9730	9735	
ggc cta ttt ccg cac tta aaa gag	gaa ttg gca aag ttt atg ggc	56540	
Gly Leu Phe Pro His Leu Lys Glu	Glu Leu Ala Lys Phe Met Gly		
9740	9745	9750	
ggg gtc gtt ggt tcc aac tgg ctt	ctc agt cca ttt agg ggc ttt	56585	
Gly Val Val Gly Ser Asn Trp Leu	Leu Ser Pro Phe Arg Gly Phe		
9755	9760	9765	
tat tgc ttt tct ggg gta gaa ggc	gtt act ttt gca cag aga ctt	56630	
Tyr Cys Phe Ser Gly Val Glu Gly	Val Thr Phe Ala Gln Arg Leu		
9770	9775	9780	
gcc tgg aaa tat att agg gag ctt	gtg ttt gca acc aca cta ttc	56675	
Ala Trp Lys Tyr Ile Arg Glu Leu	Val Phe Ala Thr Thr Leu Phe		
9785	9790	9795	

acc tct gtt	ttc cat tgt ggg gag	gtg cgg tta tgt cgc	ggt gac	56720
Thr Ser Val	Phe His Cys Gly Glu	Val Arg Leu Cys Arg	Val Asp	
9800	9805	9810		
cgt cta ggt	aag gat cca cgc ggg	tgc acg tct caa cct	aaa ggt	56765
Arg Leu Gly	Lys Asp Pro Arg Gly	Cys Thr Ser Gln Pro	Lys Gly	
9815	9820	9825		
ata ggc agt	tcc cac gga ccc tta	gac ggc att tat tta	acg tac	56810
Ile Gly Ser	Ser His Gly Pro Leu	Asp Gly Ile Tyr Leu	Thr Tyr	
9830	9835	9840		
gaa gaa aca	tgt ccc ctt gtg gct	att att caa agt gga	gaa aca	56855
Glu Glu Thr	Cys Pro Leu Val Ala	Ile Ile Gln Ser Gly	Glu Thr	
9845	9850	9855		
ggg atc gac	cag aat acc gtc gta	atc tac gat tca gac	gtt ttt	56900
Gly Ile Asp	Gln Asn Thr Val Val	Ile Tyr Asp Ser Asp	Val Phe	
9860	9865	9870		
tct ctt cta	tac acc cta atg cag	cgg ctg gct ccg gat	tca acg	56945
Ser Leu Leu	Tyr Thr Leu Met Gln	Arg Leu Ala Pro Asp	Ser Thr	
9875	9880	9885		
gac ccg gcg	ttt tca taa cctccgttac	gggggtgtgg	ttatgctttt	56993
Asp Pro Ala	Phe Ser			
9890				
tatgcatatt ttct	atg ttt gtt	acg gcg gtt gtg tcg	gtc tct cca agc	57043
	Met Phe Val	Thr Ala Val Val Ser	Val Ser Pro Ser	
	9895	9900		
tcg ttt tat	gag agt tta	caa gta gag ccc	aca	57088
Ser Phe Tyr	Glu Ser Leu	Gln Val Glu Pro Thr	Gln Ser Glu Asp	
9905	9910	9915		
ata acc cgg	tct gct cat	ctg ggc gat ggt gat	gaa atc aga gaa	57133
Ile Thr Arg	Ser Ala His	Leu Gly Asp Gly Asp	Glu Ile Arg Glu	
9920	9925	9930		
gct ata cac	aag tcc cag	gac gcc gaa aca	aaa	57178
Ala Ile His	Lys Ser Gln	Asp Ala Glu Thr Lys	Pro Thr Phe Tyr	
9935	9940	9945		
gtc tgc cca	ccg cca aca	ggc tcc aca atc gta	cga tta gaa cca	57223
Val Cys Pro	Pro Pro Thr	Gly Ser Thr Ile Val	Arg Leu Glu Pro	
9950	9955	9960		
act cgg aca	tgt ccg gat	tat cac ctt ggt	aaa	57268
Thr Arg Thr	Cys Pro Asp	Tyr His Leu Gly Lys	Asn Phe Thr Glu	
9965	9970	9975		
ggt att gct	gtt gtt tat	aaa gaa aac att gca	gcg tac aag ttt	57313
Gly Ile Ala	Val Val Tyr	Lys Glu Asn Ile Ala	Ala Tyr Lys Phe	
9980	9985	9990		

aag	gcg	acg	gta	tat	tac	aaa	gat	gtt	atc	gtt	agc	acg	gcg	tgg	57358
Lys	Ala	Thr	Val	Tyr	Tyr	Lys	Asp	Val	Ile	Val	Ser	Thr	Ala	Trp	
9995					10000					10005					
gcc	gga	agt	tct	tat	acg	caa	att	act	aat	aga	tat	gcg	gat	agg	57403
Ala	Gly	Ser	Ser	Tyr	Thr	Gln	Ile	Thr	Asn	Arg	Tyr	Ala	Asp	Arg	
10010					10015					10020					
gta	cca	att	ccc	gtt	tca	gag	atc	acg	gac	acc	att	gat	aag	ttt	57448
Val	Pro	Ile	Pro	Val	Ser	Glu	Ile	Thr	Asp	Thr	Ile	Asp	Lys	Phe	
10025					10030					10035					
ggc	aag	tgt	tct	tct	aaa	gca	acg	tac	gta	cga	aat	aac	cac	aaa	57493
Gly	Lys	Cys	Ser	Ser	Lys	Ala	Thr	Tyr	Val	Arg	Asn	Asn	His	Lys	
10040					10045					10050					
gtt	gaa	gcc	ttt	aat	gag	gat	aaa	aat	cca	cag	gat	atg	cct	cta	57538
Val	Glu	Ala	Phe	Asn	Glu	Asp	Lys	Asn	Pro	Gln	Asp	Met	Pro	Leu	
10055					10060					10065					
atc	gca	tca	aaa	tat	aat	tct	gtg	gga	tcc	aaa	gca	tgg	cat	act	57583
Ile	Ala	Ser	Lys	Tyr	Asn	Ser	Val	Gly	Ser	Lys	Ala	Trp	His	Thr	
10070					10075					10080					
acc	aat	gac	acg	tac	atg	gtt	gcc	gga	acc	ccc	gga	aca	tat	agg	57628
Thr	Asn	Asp	Thr	Tyr	Met	Val	Ala	Gly	Thr	Pro	Gly	Thr	Tyr	Arg	
10085					10090					10095					
acg	ggc	acg	tcg	gtg	aat	tgc	atc	att	gag	gaa	gtt	gaa	gcc	aga	57673
Thr	Gly	Thr	Ser	Val	Asn	Cys	Ile	Ile	Glu	Glu	Val	Glu	Ala	Arg	
10100					10105					10110					
tca	ata	ttc	cct	tat	gat	agt	ttt	gga	ctt	tcc	acg	gga	gat	ata	57718
Ser	Ile	Phe	Pro	Tyr	Asp	Ser	Phe	Gly	Leu	Ser	Thr	Gly	Asp	Ile	
10115					10120					10125					
ata	tac	atg	tcc	ccg	ttt	ttt	ggc	cta	cgg	gat	ggg	gca	tac	aga	57763
Ile	Tyr	Met	Ser	Pro	Phe	Phe	Gly	Leu	Arg	Asp	Gly	Ala	Tyr	Arg	
10130					10135					10140					
gaa	cat	tcc	aat	tat	gca	atg	gat	cgt	ttt	cac	cag	ttt	gag	ggg	57808
Glu	His	Ser	Asn	Tyr	Ala	Met	Asp	Arg	Phe	His	Gln	Phe	Glu	Gly	
10145					10150					10155					
tat	aga	caa	agg	gat	ctt	gac	act	aga	gca	tta	ctg	gaa	cct	gca	57853
Tyr	Arg	Gln	Arg	Asp	Leu	Asp	Thr	Arg	Ala	Leu	Leu	Glu	Pro	Ala	
10160					10165					10170					
gcg	cgg	aac	ttt	tta	gtc	acg	cct	cat	tta	acg	gtt	ggg	tgg	aac	57898
Ala	Arg	Asn	Phe	Leu	Val	Thr	Pro	His	Leu	Thr	Val	Gly	Trp	Asn	
10175					10180					10185					
tgg	aag	cca	aaa	cga	acg	gaa	gtt	tgt	tcg	ctt	gtc	aag	tgg	cgt	57943
Trp	Lys	Pro	Lys	Arg	Thr	Glu	Val	Cys	Ser	Leu	Val	Lys	Trp	Arg	
10190					10195					10200					
gag	gtt	gaa	gac	gta	gtt	cgc	gat	gag	tat	gca	cac	aat	ttt	cgc	57988

Glu 10205	Val	Glu	Asp	Val	Val	Arg	Asp	Glu	Tyr	Ala	His	Asn	Phe	Arg	
					10210					10215					
ttt Phe 10220	aca Thr	atg Met	aaa Lys	aca Thr	ctt Leu	tct Ser	acc Thr	acg Thr	ttt Phe	ata Ile	agt Ser	gaa Glu	aca Thr	aac Asn	58033
					10225					10230					
gag Glu 10235	ttt Phe	aat Asn	ctt Leu	aac Asn	caa Gln	atc Ile	cat His	ctc Leu	agt Ser	caa Gln	tgt Cys	gta Val	aag Lys	gag Glu	58078
					10240					10245					
gaa Glu 10250	gcc Ala	cgg Arg	gct Ala	att Ile	att Ile	aac Asn	cgg Arg	atc Ile	tat Tyr	aca Thr	acc Thr	aga Arg	tac Tyr	aac Asn	58123
					10255					10260					
tca Ser 10265	tct Ser	cat His	gtt Val	aga Arg	acc Thr	ggg Gly	gat Asp	atc Ile	cag Gln	acc Thr	tac Tyr	ctt Leu	gcc Ala	aga Arg	58168
					10270					10275					
ggg Gly 10280	ggg Gly	ttt Phe	gtt Val	gtg Val	gtg Val	ttt Phe	caa Gln	ccc Pro	ctg Leu	ctg Leu	agc Ser	aat Asn	tcc Ser	ctc Leu	58213
					10285					10290					
gcc Ala 10295	cgt Arg	ctc Leu	tat Tyr	ctc Leu	caa Gln	gaa Glu	ttg Leu	gtc Val	cgt Arg	gaa Glu	aac Asn	act Thr	aat Asn	cat His	58258
					10300					10305					
tca Ser 10310	cca Pro	caa Gln	aaa Lys	cac His	ccg Pro	act Thr	cga Arg	aat Asn	acc Thr	aga Arg	tcc Ser	cga Arg	cga Arg	agc Ser	58303
					10315					10320					
gtg Val 10325	cca Pro	gtt Val	gag Glu	ttg Leu	cgt Arg	gcc Ala	aat Asn	aga Arg	aca Thr	ata Ile	aca Thr	acc Thr	acc Thr	tca Ser	58348
					10330					10335					
tcg Ser 10340	gtg Val	gaa Glu	ttt Phe	gct Ala	atg Met	ctc Leu	cag Gln	ttt Phe	aca Thr	tat Tyr	gac Asp	cac His	att Ile	caa Gln	58393
					10345					10350					
gag Glu 10355	cat His	gtt Val	aat Asn	gaa Glu	atg Met	ttg Leu	gca Ala	cgt Arg	atc Ile	tcc Ser	tcg Ser	tcg Ser	tgg Trp	tgc Cys	58438
					10360					10365					
cag Gln 10370	cta Leu	caa Gln	aat Asn	cgc Arg	gaa Glu	cgc Arg	gcc Ala	ctt Leu	tgg Trp	agc Ser	gga Gly	cta Leu	ttt Phe	cca Pro	58483
					10375					10380					
att Ile 10385	aac Asn	cca Pro	agt Ser	gct Ala	tta Leu	gcg Ala	agc Ser	acc Thr	att Ile	ttg Leu	gat Asp	caa Gln	cgt Arg	gtt Val	58528
					10390					10395					
aaa Lys 10400	gct Ala	cgt Arg	att Ile	ctc Leu	ggc Gly	gac Asp	gtt Val	atc Ile	tcc Ser	gtt Val	tct Ser	aat Asn	tgt Cys	cca Pro	58573
					10405					10410					
gaa Glu	ctg Leu	gga Gly	tca Ser	gat Asp	aca Thr	cgc Arg	att Ile	ata Ile	ctt Leu	caa Gln	aac Asn	tct Ser	atg Met	agg Arg	58618

10415		10420		10425	
gta	tct ggt agt act acg	cgt tgt tat agc cgt	cct tta att tca	58663	
Val	Ser Gly Ser Thr Thr	Arg Cys Tyr Ser Arg	Pro Leu Ile Ser		
10430		10435		10440	
ata	gtt agt tta aat ggg	tcc ggg acg gtg gag	ggc cag ctt gga	58708	
Ile	Val Ser Leu Asn Gly	Ser Gly Thr Val Glu	Gly Gln Leu Gly		
10445		10450		10455	
aca	gat aac gag tta att	atg tcc aga gat ctg	tta gaa cca tgc	58753	
Thr	Asp Asn Glu Leu Ile	Met Ser Arg Asp Leu	Leu Glu Pro Cys		
10460		10465		10470	
gtg	gct aat cac aag cga	tat ttt cta ttt ggg	cat cac tac gta	58798	
Val	Ala Asn His Lys Arg	Tyr Phe Leu Phe Gly	His His Tyr Val		
10475		10480		10485	
tat	tat gag gat tat cgt	tac gtc cgt gaa atc	gca gtc cat gat	58843	
Tyr	Tyr Glu Asp Tyr Arg	Tyr Val Arg Glu Ile	Ala Val His Asp		
10490		10495		10500	
gtg	gga atg att agc act	tac gta gat tta aac	tta aca ctt ctt	58888	
Val	Gly Met Ile Ser Thr	Tyr Val Asp Leu Asn	Leu Thr Leu Leu		
10505		10510		10515	
aaa	gat aga gag ttt atg	ccg ctg caa gta tat	aca aga gac gag	58933	
Lys	Asp Arg Glu Phe Met	Pro Leu Gln Val Tyr	Thr Arg Asp Glu		
10520		10525		10530	
ctg	cgg gat aca gga tta	cta gac tac agt gaa	att caa cgc cga	58978	
Leu	Arg Asp Thr Gly Leu	Leu Asp Tyr Ser Glu	Ile Gln Arg Arg		
10535		10540		10545	
aat	caa atg cat tcg ctg	cgt ttt tat gac ata	gac aag gtt gtg	59023	
Asn	Gln Met His Ser Leu	Arg Phe Tyr Asp Ile	Asp Lys Val Val		
10550		10555		10560	
caa	tat gat agc gga acg	gcc att atg cag ggc	atg gct cag ttt	59068	
Gln	Tyr Asp Ser Gly Thr	Ala Ile Met Gln Gly	Met Ala Gln Phe		
10565		10570		10575	
ttc	cag gga ctt ggg acc	gcg ggc cag gcc gtt	gga cat gtg gtt	59113	
Phe	Gln Gly Leu Gly Thr	Ala Gly Gln Ala Val	Gly His Val Val		
10580		10585		10590	
ctt	ggg gcc acg gga gcg	ctg ctt tcc acc gta	cac gga ttt acc	59158	
Leu	Gly Ala Thr Gly Ala	Leu Leu Ser Thr Val	His Gly Phe Thr		
10595		10600		10605	
acg	ttt tta tct aac cca	ttt ggg gca ttg gcc	gtg gga tta ttg	59203	
Thr	Phe Leu Ser Asn Pro	Phe Gly Ala Leu Ala	Val Gly Leu Leu		
10610		10615		10620	
gtt	ttg gcg gga ctg gta	gcg gcc ttt ttt gcg	tac cgg tac gtg	59248	
Val	Leu Ala Gly Leu Val	Ala Ala Phe Phe Ala	Tyr Arg Tyr Val		
10625		10630		10635	

ctt	aaa	ctt	aaa	aca	agc	ccg	atg	aag	gca	tta	tat	cca	ctc	aca	59293
Leu	Lys	Leu	Lys	Thr	Ser	Pro	Met	Lys	Ala	Leu	Tyr	Pro	Leu	Thr	
10640					10645					10650					
acc	aag	ggg	tta	aaa	cag	tta	ccg	gaa	gga	atg	gat	ccc	ttt	gcc	59338
Thr	Lys	Gly	Leu	Lys	Gln	Leu	Pro	Glu	Gly	Met	Asp	Pro	Phe	Ala	
10655					10660					10665					
gag	aaa	ccc	aac	gct	act	gat	acc	cca	ata	gaa	gaa	att	ggc	gac	59383
Glu	Lys	Pro	Asn	Ala	Thr	Asp	Thr	Pro	Ile	Glu	Glu	Ile	Gly	Asp	
10670					10675					10680					
tca	caa	aac	act	gaa	ccg	tcg	gta	aat	agc	ggg	ttt	gat	ccc	gat	59428
Ser	Gln	Asn	Thr	Glu	Pro	Ser	Val	Asn	Ser	Gly	Phe	Asp	Pro	Asp	
10685					10690					10695					
aaa	ttt	cga	gaa	gcc	cag	gaa	atg	att	aaa	tat	atg	acg	tta	gta	59473
Lys	Phe	Arg	Glu	Ala	Gln	Glu	Met	Ile	Lys	Tyr	Met	Thr	Leu	Val	
10700					10705					10710					
tct	gcg	gct	gag	cgc	caa	gaa	tct	aaa	gcc	cgc	aaa	aaa	aat	aag	59518
Ser	Ala	Ala	Glu	Arg	Gln	Glu	Ser	Lys	Ala	Arg	Lys	Lys	Asn	Lys	
10715					10720					10725					
act	agc	gcc	ctt	tta	act	tca	cgt	ctt	acc	ggc	ctt	gct	tta	cga	59563
Thr	Ser	Ala	Leu	Leu	Thr	Ser	Arg	Leu	Thr	Gly	Leu	Ala	Leu	Arg	
10730					10735					10740					
aat	cgc	cga	gga	tac	tcc	cgt	gtt	cgc	acc	gag	aat	gta	acg	ggg	59608
Asn	Arg	Arg	Gly	Tyr	Ser	Arg	Val	Arg	Thr	Glu	Asn	Val	Thr	Gly	
10745					10750					10755					
gtg	taa	atagccaggg	ggtttgtttt	aattttattaa	taaaaatgtg	tattacgtta									59664
Val															
10760															
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				Met	Glu	Ser	Ser								
aac	att	aac	gcg	cta	caa	caa	ccg	tcg	tct	atc	gca	cat	cat	ccg	59822
Asn	Ile	Asn	Ala	Leu	Gln	Gln	Pro	Ser	Ser	Ile	Ala	His	His	Pro	
10765					10770					10775					
tcc	aaa	cag	tgc	gct	tca	agt	ctc	aat	gaa	aca	gta	aaa	gat	tct	59867
Ser	Lys	Gln	Cys	Ala	Ser	Ser	Leu	Asn	Glu	Thr	Val	Lys	Asp	Ser	
10780					10785					10790					
ccc	ccc	gcg	att	tat	gaa	gat	agg	tta	gaa	cac	acg	ccg	gta	caa	59912
Pro	Pro	Ala	Ile	Tyr	Glu	Asp	Arg	Leu	Glu	His	Thr	Pro	Val	Gln	
10795					10800					10805					
tta	ccc	cgc	gac	ggg	aca	ccc	cga	gac	gta	tgt	tct	gtg	gga	cag	59957
Leu	Pro	Arg	Asp	Gly	Thr	Pro	Arg	Asp	Val	Cys	Ser	Val	Gly	Gln	

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Leu	Thr Cys Arg Ala	Cys	Ala Thr Lys Pro	Phe	Arg Leu Asn Arg
10825		10830		10835	60002
gac	agc caa tac gac	tac	tta aac aca tgt	cca	ggg ggc cgt cat
Asp	Ser Gln Tyr Asp	Tyr	Leu Asn Thr Cys	Pro	Gly Gly Arg His
10840		10845		10850	60047
att	tca ctg gca ctg	gag	att ata acg ggt	cga	tgg gtt tgc atc
Ile	Ser Leu Ala Leu	Glu	Ile Ile Thr Gly	Arg	Trp Val Cys Ile
10855		10860		10865	60092
ccg	cgt gtg ttt ccg	gat	acc cca gag gaa	aaa	tgg atg gcg cca
Pro	Arg Val Phe Pro	Asp	Thr Pro Glu Glu	Lys	Trp Met Ala Pro
10870		10875		10880	60137
tat	att att cca gac	cga	gaa caa cca tca	tca	ggg gat gaa gat
Tyr	Ile Ile Pro Asp	Arg	Glu Gln Pro Ser	Ser	Gly Asp Glu Asp
10885		10890		10895	60182
tct	gac acc gat taa	atttaactta	aataaaacct	taccacccat	aaaaacgcct
Ser	Asp Thr Asp				
10900					60237
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60297					
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60897					
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60957					
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61017					
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61077					
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61137					
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61197					

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acaataaac	atg tca	acg gat	aaa acc gat	gta aaa	atg ggc gtt	64842
	Met Ser	Thr Asp	Lys Thr Asp	Val Lys	Met Gly Val	
	10905		10910		10915	
ttg cgt att tat ttg	gac ggg gcg tat gga	att gga	aaa aca acc			64887
Leu Arg Ile Tyr Leu	Asp Gly Ala Tyr Gly	Ile Gly	Lys Thr Thr			
	10920		10925		10930	
gcc gcc gaa gaa ttt	tta cac cac ttt gca	ata aca	cca aac cgg			64932
Ala Ala Glu Glu Phe	Leu His His Phe Ala	Ile Thr	Pro Asn Arg			
	10935		10940		10945	
atc tta ctc att ggg	gag ccc ctg tcg tat	tggt cgt	aac ctt gca			64977
Ile Leu Leu Ile Gly	Glu Pro Leu Ser Tyr	Trp Arg	Asn Leu Ala			
	10950		10955		10960	
ggg gag gac gcc att	tgc gga att tac gga	aca caa	act cgc cgt			65022
Gly Glu Asp Ala Ile	Cys Gly Ile Tyr Gly	Thr Gln	Thr Arg Arg			
	10965		10970		10975	
ctt aat gga gac gtt	tcg cct gaa gac gca	caa cgc	ctc acg gct			65067
Leu Asn Gly Asp Val	Ser Pro Glu Asp Ala	Gln Arg	Leu Thr Ala			
	10980		10985		10990	
cat ttt cag agc ctg	ttc tgt tct ccg cat	gca att	atg cat gcg			65112
His Phe Gln Ser Leu	Phe Cys Ser Pro His	Ala Ile	Met His Ala			
	10995		11000		11005	
aaa atc tcg gca ttg	atg gac aca agt aca	tcg gat	ctc gta caa			65157
Lys Ile Ser Ala Leu	Met Asp Thr Ser Thr	Ser Asp	Leu Val Gln			
	11010		11015		11020	
gta aat aag gag ccg	tat aaa att atg tta	tcc gac	cga cac cca			65202
Val Asn Lys Glu Pro	Tyr Lys Ile Met Leu	Ser Asp	Arg His Pro			
	11025		11030		11035	
atc gcc tca act ata	tgt ttt ccc ttg tcc	aga tac	tta gtg gga			65247
Ile Ala Ser Thr Ile	Cys Phe Pro Leu Ser	Arg Tyr	Leu Val Gly			
	11040		11045		11050	
gat atg tcc cca gcg	gcg ctt cct ggg tta	ttg ttt	acg ctt ccc			65292
Asp Met Ser Pro Ala	Ala Leu Pro Gly Leu	Leu Phe	Thr Leu Pro			
	11055		11060		11065	
gct gaa ccc ccc ggg	acc aac ttg gta gtt	tgt acc	ggt tca ctc			65337
Ala Glu Pro Pro Gly	Thr Asn Leu Val Val	Cys Thr	Val Ser Leu			
	11070		11075		11080	
ccc agt cat tta tcc	aga gta agc aaa cgg	gcc aga	ccg gga gaa			65382
Pro Ser His Leu Ser	Arg Val Ser Lys Arg	Ala Arg	Pro Gly Glu			

11085					11090					11095					
acg gtt aat ctg ccg	ttt gtt atg gtt ctg	aga aat gta tat ata	65427												
Thr Val Asn Leu Pro	Phe Val Met Val Leu	Arg Asn Val Tyr Ile													
11100	11105	11110													
atg ctt att aat aca	att ata ttt ctt aaa	act aac aac tgg cac	65472												
Met Leu Ile Asn Thr	Ile Ile Phe Leu Lys	Thr Asn Asn Trp His													
11115	11120	11125													
gcg ggc tgg aac aca	ctg tca ttt tgt aat	gat gta ttt aaa cag	65517												
Ala Gly Trp Asn Thr	Leu Ser Phe Cys Asn	Asp Val Phe Lys Gln													
11130	11135	11140													
aaa tta caa aaa tcc	gag tgt ata aaa cta	cgc gaa gta cct ggg	65562												
Lys Leu Gln Lys Ser	Glu Cys Ile Lys Leu	Arg Glu Val Pro Gly													
11145	11150	11155													
att gaa gac acg tta	ttc gcc gtg ctt aaa	ctt ccg gag ctt tgc	65607												
Ile Glu Asp Thr Leu	Phe Ala Val Leu Lys	Leu Pro Glu Leu Cys													
11160	11165	11170													
gga gag ttt gga aat	att ctg ccg tta tgg	gca tgg gga atg gag	65652												
Gly Glu Phe Gly Asn	Ile Leu Pro Leu Trp	Ala Trp Gly Met Glu													
11175	11180	11185													
acc ctt tca aac tgc	tca cga agc atg tct	ccg ttc gta tta tcg	65697												
Thr Leu Ser Asn Cys	Ser Arg Ser Met Ser	Pro Phe Val Leu Ser													
11190	11195	11200													
tta gaa cag aca ccc	cag cat gcg gca caa	gaa cta aaa act ctg	65742												
Leu Glu Gln Thr Pro	Gln His Ala Ala Gln	Glu Leu Lys Thr Leu													
11205	11210	11215													
cta ccc cag atg acc	ccg gca aac atg tcc	tcc ggt gca tgg aat	65787												
Leu Pro Gln Met Thr	Pro Ala Asn Met Ser	Ser Gly Ala Trp Asn													
11220	11225	11230													
ata ttg aaa gag ctt	gtt aat gcc gtt cag	gac aac act tcc taa	65832												
Ile Leu Lys Glu Leu	Val Asn Ala Val Gln	Asp Asn Thr Ser													
11235	11240														
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t atg ttt gcg cta gtt tta	gcg gtg gta att ctt	cct ctt tgg	66115												
Met Phe Ala Leu Val Leu	Ala Val Val Ile Leu	Pro Leu Trp													
11245	11250	11255													
acc acg gct aat aaa tct tac	gta aca cca acc cct	gcg act cgc	66160												
Thr Thr Ala Asn Lys Ser Tyr	Val Thr Pro Thr Pro	Ala Thr Arg													
11260	11265	11270													

tct atc	gga cat atg tct gct	ctt cta cga gaa tat	tcc gac cgt	66205
Ser Ile	Gly His Met Ser Ala	Leu Leu Arg Glu Tyr	Ser Asp Arg	
11275	11280	11285		
aat atg	tct ctg aaa tta gaa	gcc ttt tat cct act	ggg ttc gat	66250
Asn Met	Ser Leu Lys Leu Glu	Ala Phe Tyr Pro Thr	Gly Phe Asp	
11290	11295	11300		
gaa gaa	ctc att aaa tca ctt	cac tgg gga aat gat	aga aaa cac	66295
Glu Glu	Leu Ile Lys Ser Leu	His Trp Gly Asn Asp	Arg Lys His	
11305	11310	11315		
gtt ttc	ttg gtt att gtt aag	gtt aac cct aca aca	cac gaa gga	66340
Val Phe	Leu Val Ile Val Lys	Val Asn Pro Thr Thr	His Glu Gly	
11320	11325	11330		
gac gtc	ggg ctg gtt ata ttt	cca aaa tac ttg tta	tcg cca tac	66385
Asp Val	Gly Leu Val Ile Phe	Pro Lys Tyr Leu Leu	Ser Pro Tyr	
11335	11340	11345		
cat ttc	aaa gca gaa cat cga	gca ccg ttt cct gct	gga cgt ttt	66430
His Phe	Lys Ala Glu His Arg	Ala Pro Phe Pro Ala	Gly Arg Phe	
11350	11355	11360		
gga ttt	ctt agt cac cct gtg	aca ccc gac gtg agc	ttc ttt gac	66475
Gly Phe	Leu Ser His Pro Val	Thr Pro Asp Val Ser	Phe Phe Asp	
11365	11370	11375		
agt tcg	ttt gcg ccg tat tta	act acg caa cat ctt	gtt gcg ttt	66520
Ser Ser	Phe Ala Pro Tyr Leu	Thr Thr Gln His Leu	Val Ala Phe	
11380	11385	11390		
act acg	ttc cca cca aac ccc	ctt gta tgg cat ttg	gaa aga gct	66565
Thr Thr	Phe Pro Pro Asn Pro	Leu Val Trp His Leu	Glu Arg Ala	
11395	11400	11405		
gag acc	gca gca act gca gaa	agg ccg ttt ggg gta	agt ctt tta	66610
Glu Thr	Ala Ala Thr Ala Glu	Arg Pro Phe Gly Val	Ser Leu Leu	
11410	11415	11420		
ccc gct	cgc cca aca gtc ccc	aag aat act att ctg	gaa cat aaa	66655
Pro Ala	Arg Pro Thr Val Pro	Lys Asn Thr Ile Leu	Glu His Lys	
11425	11430	11435		
gcg cat	ttt gct aca tgg gat	gcc ctt gcc cga cat	act ttt ttt	66700
Ala His	Phe Ala Thr Trp Asp	Ala Leu Ala Arg His	Thr Phe Phe	
11440	11445	11450		
tct gcc	gaa gca att atc acc	aac tca acg ttg aga	ata cac gtt	66745
Ser Ala	Glu Ala Ile Ile Thr	Asn Ser Thr Leu Arg	Ile His Val	
11455	11460	11465		
ccc ctt	ttt ggg tcg gta tgg	cca att cga tac tgg	gcc acc ggt	66790
Pro Leu	Phe Gly Ser Val Trp	Pro Ile Arg Tyr Trp	Ala Thr Gly	
11470	11475	11480		

tcg gtg	ctt ctc	aca agc	gac	tcg ggt	cgt gtg	gaa	gta aat	att	66835
Ser Val	Leu Leu	Thr Ser	Asp	Ser Gly	Arg Val	Glu	Val Asn	Ile	
11485			11490			11495			
ggg gta	gga ttt	atg agc	tcg	ctc att	tct tta	tcc	tct gga	cca	66880
Gly Val	Gly Phe	Met Ser	Ser	Leu Ile	Ser Leu	Ser	Ser Gly	Pro	
11500			11505			11510			
ccg ata	gaa tta	att gtt	gta	cca cat	aca gta	aaa	ctg aac	gcg	66925
Pro Ile	Glu Leu	Ile Val	Val	Pro His	Thr Val	Lys	Leu Asn	Ala	
11515			11520			11525			
gtt aca	agc gac	acc aca	tgg	ttc cag	cta aat	cca	ccg ggt	ccg	66970
Val Thr	Ser Asp	Thr Thr	Trp	Phe Gln	Leu Asn	Pro	Pro Gly	Pro	
11530			11535			11540			
gat ccg	ggg cca	tct tat	cga	gtt tat	tta ctt	gga	cgt ggg	ttg	67015
Asp Pro	Gly Pro	Ser Tyr	Arg	Val Tyr	Leu Leu	Gly	Arg Gly	Leu	
11545			11550			11555			
gat atg	aat ttt	tca aag	cat	gct acg	gtc gat	ata	tgc gca	tat	67060
Asp Met	Asn Phe	Ser Lys	His	Ala Thr	Val Asp	Ile	Cys Ala	Tyr	
11560			11565			11570			
ccc gaa	gag agt	ttg gat	tac	cgc tat	cat tta	tcc	atg gcc	cac	67105
Pro Glu	Glu Ser	Leu Asp	Tyr	Arg Tyr	His Leu	Ser	Met Ala	His	
11575			11580			11585			
acg gag	gct ctg	cgg atg	aca	acg aag	gcg gat	caa	cat gac	ata	67150
Thr Glu	Ala Leu	Arg Met	Thr	Thr Lys	Ala Asp	Gln	His Asp	Ile	
11590			11595			11600			
aac gag	gaa agc	tat tac	cat	atc gcc	gca aga	ata	gcc aca	tca	67195
Asn Glu	Glu Ser	Tyr Tyr	His	Ile Ala	Ala Arg	Ile	Ala Thr	Ser	
11605			11610			11615			
att ttt	gcg ttg	tcg gaa	atg	ggc cgt	acc aca	gaa	tat ttt	ctg	67240
Ile Phe	Ala Leu	Ser Glu	Met	Gly Arg	Thr Thr	Glu	Tyr Phe	Leu	
11620			11625			11630			
tta gat	gag atc	gta gat	gtt	cag tat	caa tta	aaa	ttc ctt	aat	67285
Leu Asp	Glu Ile	Val Asp	Val	Gln Tyr	Gln Leu	Lys	Phe Leu	Asn	
11635			11640			11645			
tac att	tta atg	cgg ata	gga	gca gga	gct cat	ccc	aac act	ata	67330
Tyr Ile	Leu Met	Arg Ile	Gly	Ala Gly	Ala His	Pro	Asn Thr	Ile	
11650			11655			11660			
tcc gga	acc tcg	gat ctg	atc	ttt gcc	gat cca	tcg	cag ctt	cat	67375
Ser Gly	Thr Ser	Asp Leu	Ile	Phe Ala	Asp Pro	Ser	Gln Leu	His	
11665			11670			11675			
gac gaa	ctt tca	ctt ctt	ttt	ggg cag	gta aaa	ccc	gca aat	gtc	67420
Asp Glu	Leu Ser	Leu Leu	Phe	Gly Gln	Val Lys	Pro	Ala Asn	Val	
11680			11685			11690			
gat tat	ttt att	tca tat	gat	gaa gcc	cgt gat	caa	cta aag	acc	67465

Asp Tyr	Phe Ile Ser Tyr	Asp	Glu Ala Arg Asp	Gln	Leu Lys Thr	
11695		11700		11705		
gca tac	gcg ctt tcc cgt ggt	caa gac cat gtg aat	gca ctt tct	67510		
Ala Tyr	Ala Leu Ser Arg Gly	Gln Asp His Val Asn	Ala Leu Ser			
11710		11715	11720			
ctc gcc	agg cgt gtt ata atg	agc ata tac aag ggg	ctg ctt gtg	67555		
Leu Ala	Arg Arg Val Ile Met	Ser Ile Tyr Lys Gly	Leu Leu Val			
11725		11730	11735			
aag caa	aat tta aat gct aca	gag agg cag gct tta	ttt ttt gcc	67600		
Lys Gln	Asn Leu Asn Ala Thr	Glu Arg Gln Ala Leu	Phe Phe Ala			
11740		11745	11750			
tca atg	att tta tta aat ttc	cgc gaa gga cta gaa	aat tca tct	67645		
Ser Met	Ile Leu Leu Asn Phe	Arg Glu Gly Leu Glu	Asn Ser Ser			
11755		11760	11765			
cgg gta	tta gac ggt cgc aca	act ttg ctt tta atg	aca tcc atg	67690		
Arg Val	Leu Asp Gly Arg Thr	Thr Leu Leu Leu Met	Thr Ser Met			
11770		11775	11780			
tgt acg	gca gct cac gcc acg	caa gca gca ctt aac	ata caa gaa	67735		
Cys Thr	Ala Ala His Ala Thr	Gln Ala Ala Leu Asn	Ile Gln Glu			
11785		11790	11795			
ggc ctg	gca tac tta aat cct	tca aaa cac atg ttt	aca ata cca	67780		
Gly Leu	Ala Tyr Leu Asn Pro	Ser Lys His Met Phe	Thr Ile Pro			
11800		11805	11810			
aac gta	tac agt cct tgt atg	ggc tcc ctt cgt aca	gac ctc acg	67825		
Asn Val	Tyr Ser Pro Cys Met	Gly Ser Leu Arg Thr	Asp Leu Thr			
11815		11820	11825			
gaa gag	att cat gtt atg aat	ctc ctg tcg gca ata	cca aca cgc	67870		
Glu Glu	Ile His Val Met Asn	Leu Leu Ser Ala Ile	Pro Thr Arg			
11830		11835	11840			
cca gga	ctt aac gag gta ttg	cat acc caa cta gac	gaa tct gaa	67915		
Pro Gly	Leu Asn Glu Val Leu	His Thr Gln Leu Asp	Glu Ser Glu			
11845		11850	11855			
ata ttc	gac gcg gca ttt aaa	acc atg atg att ttt	acc aca tgg	67960		
Ile Phe	Asp Ala Ala Phe Lys	Thr Met Met Ile Phe	Thr Thr Trp			
11860		11865	11870			
act gcc	aaa gat ttg cat ata	ctc cac acc cat gta	cca gaa gta	68005		
Thr Ala	Lys Asp Leu His Ile	Leu His Thr His Val	Pro Glu Val			
11875		11880	11885			
ttt acg	tgt caa gat gca gcc	gcg cgt aac gga gaa	tat gtg ctc	68050		
Phe Thr	Cys Gln Asp Ala Ala	Ala Arg Asn Gly Glu	Tyr Val Leu			
11890		11895	11900			
att ctt	cca gct gtc cag gga	cac agt tat gtg att	aca cga aac	68095		
Ile Leu	Pro Ala Val Gln Gly	His Ser Tyr Val Ile	Thr Arg Asn			

11905		11910		11915	
aaa cct	caa agg ggt ttg gta	tat tcc ctg gca gat	gtg gat gta	68140	
Lys Pro	Gln Arg Gly Leu Val	Tyr Ser Leu Ala Asp	Val Asp Val		
11920	11925	11930			
tat aac	ccc ata tcc gtt gtt	tat tta agc agg gat	act tgc gtg	68185	
Tyr Asn	Pro Ile Ser Val Val	Tyr Leu Ser Arg Asp	Thr Cys Val		
11935	11940	11945			
tct gaa	cat ggt gtc ata gag	acg gtc gca ctg ccc	cat ccg gac	68230	
Ser Glu	His Gly Val Ile Glu	Thr Val Ala Leu Pro	His Pro Asp		
11950	11955	11960			
aat tta	aaa gaa tgt ttg tat	tgc gga agt gtt ttt	ctt agg tat	68275	
Asn Leu	Lys Glu Cys Leu Tyr	Cys Gly Ser Val Phe	Leu Arg Tyr		
11965	11970	11975			
cta acc	acg ggg gcg att atg	gat ata att att att	gac agc aaa	68320	
Leu Thr	Thr Gly Ala Ile Met	Asp Ile Ile Ile Ile	Asp Ser Lys		
11980	11985	11990			
gat aca	gaa cga caa cta gcc	gct atg gga aac tcc	aca att cca	68365	
Asp Thr	Glu Arg Gln Leu Ala	Ala Met Gly Asn Ser	Thr Ile Pro		
11995	12000	12005			
ccc ttc	aat cca gac atg cac	ggg gat gac tct aag	gct gtg ttg	68410	
Pro Phe	Asn Pro Asp Met His	Gly Asp Asp Ser Lys	Ala Val Leu		
12010	12015	12020			
ttg ttt	cca aac gga act gtg	gta acg ctt cta gga	ttc gaa cga	68455	
Leu Phe	Pro Asn Gly Thr Val	Val Thr Leu Leu Gly	Phe Glu Arg		
12025	12030	12035			
cga caa	gcc ata cga atg tcg	gga caa tac ctt ggg	gcc tct tta	68500	
Arg Gln	Ala Ile Arg Met Ser	Gly Gln Tyr Leu Gly	Ala Ser Leu		
12040	12045	12050			
gga ggg	gcg ttt ctg gcg gta	gtg ggg ttt ggt att	atc gga tgg	68545	
Gly Gly	Ala Phe Leu Ala Val	Val Gly Phe Gly Ile	Ile Gly Trp		
12055	12060	12065			
atg tta	tgt gga aat tcc cgc	ctt cga gaa tat aat	aaa ata cct	68590	
Met Leu	Cys Gly Asn Ser Arg	Leu Arg Glu Tyr Asn	Lys Ile Pro		
12070	12075	12080			
ctg aca	taa aaaacatgta taataaaaag	tcactataaa cgtattctct		68639	
Leu Thr					
12085					
acaatactttt attcgcggaat aatacacact acctttgggt ttttttcccg tccccaaatg				68699	
gtgttttggtg cactctacca aaaaatagag cgccataaata tgctatataa cgccctccag				68759	
caaaatacgg ttcaaaggca ttacccgata ttgtattgta gtacagggca atgggaattg				68819	
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gggtatctaa	gtaccgggat	atctcatact	catgcctttc	cgtgacagaa	acatcaaccg	68939
gaacagtatc	cgataaacca	actcctgttt	ttgcaaggcg	taaaattcgc	acaccttcct	68999
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aagtttcagc	caacgtgcc	ataaagccca	cttccctcaa	gaggctgttt	gctgtatcca	69119
caatgggtccg	tattaaatct	tgagcaactt	gatccgtgtc	atcatcactg	ggtaacgcgt	69179
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ctccaaacat	acgtaaacat	ttagagaggg	tgthtataaca	gtctgtcagg	cggggtatat	70559

tctacataat	acaaggatcg	gctttaactt	tgtcaacatt	tttactttgg	actataaact	70619
gcgactgaac	ggt atg aac cca ccc caa	gcc cgc gtc tcg gaa	cag		70665	
	Met Asn Pro Pro Gln	Ala Arg Val Ser Glu	Gln			
	12090		12095			
aca aag gac ttg	ctt agc gtt atg gtt	aac cag cac ccc gaa	gag	70710		
Thr Lys Asp Leu	Leu Ser Val Met Val	Asn Gln His Pro Glu	Glu			
	12100	12105	12110			
gac gca aaa gtg	tgt aaa tcc agt gat	aat tca ccg ctt tat	aac	70755		
Asp Ala Lys Val	Cys Lys Ser Ser Asp	Asn Ser Pro Leu Tyr	Asn			
	12115	12120	12125			
acc atg gtt atg	tta tcg tat ggg ggt	gat acg gac tta cta	tta	70800		
Thr Met Val Met	Leu Ser Tyr Gly Gly	Asp Thr Asp Leu Leu	Leu			
	12130	12135	12140			
agc tct gca tgt	acc cgc aca tct acc	gta aac agg tcg gcg	ttt	70845		
Ser Ser Ala Cys	Thr Arg Thr Ser Thr	Val Asn Arg Ser Ala	Phe			
	12145	12150	12155			
acg caa cac tcc	gtg ttt tat att ata	tcc acg gtg ttg att	caa	70890		
Thr Gln His Ser	Val Phe Tyr Ile Ile	Ser Thr Val Leu Ile	Gln			
	12160	12165	12170			
cca ata tgt tgt	atc ttc ttt ttt ttt	tac tat aaa gcg aca	cgc	70935		
Pro Ile Cys Cys	Ile Phe Phe Phe Phe	Tyr Tyr Lys Ala Thr	Arg			
	12175	12180	12185			
tgt atg ctc tta	ttc aca gcc ggg tta	ctt ctg acg att cta	cat	70980		
Cys Met Leu Leu	Phe Thr Ala Gly Leu	Leu Leu Thr Ile Leu	His			
	12190	12195	12200			
cac ttt cga ctt	att att atg tta ttg	tgt gtc tac aga aat	ata	71025		
His Phe Arg Leu	Ile Ile Met Leu Leu	Cys Val Tyr Arg Asn	Ile			
	12205	12210	12215			
cga tca gac ctg	cta ccc tta tct aca	tcc cag caa ctg ctg	ctt	71070		
Arg Ser Asp Leu	Leu Pro Leu Ser Thr	Ser Gln Gln Leu Leu	Leu			
	12220	12225	12230			
gga att att gtt	gtg act cga aca atg	cta ttt tgt att acg	gcg	71115		
Gly Ile Ile Val	Val Thr Arg Thr Met	Leu Phe Cys Ile Thr	Ala			
	12235	12240	12245			
tat tat act ctt	ttt ata gac acc cgg	gtg ttc ttt ttg att	acc	71160		
Tyr Tyr Thr Leu	Phe Ile Asp Thr Arg	Val Phe Phe Leu Ile	Thr			
	12250	12255	12260			
gga cac ttg caa	agt gag gtt att ttt	cca gat agc gtt tca	aaa	71205		
Gly His Leu Gln	Ser Glu Val Ile Phe	Pro Asp Ser Val Ser	Lys			
	12265	12270	12275			
ata ctt cct gtg	tcg tgg ggt cca agt	cca gcc gtg tta ctg	gta	71250		
Ile Leu Pro Val	Ser Trp Gly Pro Ser	Pro Ala Val Leu Leu	Val			
	12280	12285	12290			

atg gcg gca gtt	att tac gct atg gac	tgt ttg gtg gac acg	gta	71295
Met Ala Ala Val	Ile Tyr Ala Met Asp	Cys Leu Val Asp Thr	Val	
12295	12300	12305		
tcc ttt att ggg	cca agg gtg tgg gtc	cgt gtt atg tta aaa	aca	71340
Ser Phe Ile Gly	Pro Arg Val Trp Val	Arg Val Met Leu Lys	Thr	
12310	12315	12320		
tct att tcg ttt	tag tccatttcaa taaatgtact	ataattgttc agtctaaaaa		71395
Ser Ile Ser Phe				
12325				
taatgttggg tattttataat	taccgcccc gtgttacttg	gaaacaccca tacatatgtt		71455
ccactctaca tcaaactttct	cgcagttttc ttgttccgc	acacgtttac acgtccggat		71515
tcaagtcgca acgctgctga	caaa atg aca acg gtt tca	tgt ccc gct aac		71566
	Met Thr Thr Val Ser	Cys Pro Ala Asn		
	12330			
gtg att act aca acg gaa	tct gat cgt att gct	ggg tta ttt aac		71611
Val Ile Thr Thr Thr Glu	Ser Asp Arg Ile Ala	Gly Leu Phe Asn		
12335	12340	12345		
atc cca gcg ggg atc att	cca act gga aat gtg	ctg tca acc ata		71656
Ile Pro Ala Gly Ile Ile	Pro Thr Gly Asn Val	Leu Ser Thr Ile		
12350	12355	12360		
gag gtg tgt gca cac cgt	tgc att ttt gat ttt	ttt aaa caa ata		71701
Glu Val Cys Ala His Arg	Cys Ile Phe Asp Phe	Phe Lys Gln Ile		
12365	12370	12375		
cga tca gat gat aac agc	ctt tac tcg gct caa	ttc gat att ctt		71746
Arg Ser Asp Asp Asn Ser	Leu Tyr Ser Ala Gln	Phe Asp Ile Leu		
12380	12385	12390		
ttg ggg aca tac tgc aat	aca tta aac ttt gtg	cgt ttt cta gaa		71791
Leu Gly Thr Tyr Cys Asn	Thr Leu Asn Phe Val	Arg Phe Leu Glu		
12395	12400	12405		
ctt gga ctg tct gtc gct	tgc atc tgt act aaa	ttt ccg gag ctg		71836
Leu Gly Leu Ser Val Ala	Cys Ile Cys Thr Lys	Phe Pro Glu Leu		
12410	12415	12420		
gct tac gtg cga gat ggc	gtt att caa ttt gag	gta caa caa ccc		71881
Ala Tyr Val Arg Asp Gly	Val Ile Gln Phe Glu	Val Gln Gln Pro		
12425	12430	12435		
atg ata gca cgt gat ggc	cca cat ccc gtc gat	cag cct gtt cat		71926
Met Ile Ala Arg Asp Gly	Pro His Pro Val Asp	Gln Pro Val His		
12440	12445	12450		
aat tat atg gtt aag cgg	ata cac aag cgt tcg	tta agc gct gcg		71971
Asn Tyr Met Val Lys Arg	Ile His Lys Arg Ser	Leu Ser Ala Ala		
12455	12460	12465		

ttt	gca	att	gca	tcg	gaa	gcg	ttg	agt	ttg	tta	agt	aac	aca	tat	72016
Phe	Ala	Ile	Ala	Ser	Glu	Ala	Leu	Ser	Leu	Leu	Ser	Asn	Thr	Tyr	
12470					12475					12480					
gtc	gat	ggg	aca	gag	att	gac	tca	tcg	tta	cgt	ata	aga	gct	atc	72061
Val	Asp	Gly	Thr	Glu	Ile	Asp	Ser	Ser	Leu	Arg	Ile	Arg	Ala	Ile	
12485					12490					12495					
caa	cag	atg	gct	cgt	aat	tta	cgc	acc	ggt	ttg	gac	tca	ttt	gaa	72106
Gln	Gln	Met	Ala	Arg	Asn	Leu	Arg	Thr	Val	Leu	Asp	Ser	Phe	Glu	
12500					12505					12510					
cga	ggc	act	gcc	gat	caa	ctt	ctt	ggg	ggt	cta	ttg	gag	aaa	gcc	72151
Arg	Gly	Thr	Ala	Asp	Gln	Leu	Leu	Gly	Val	Leu	Leu	Glu	Lys	Ala	
12515					12520					12525					
cca	ccg	cta	tcg	ctg	ctt	tca	cca	att	aat	aaa	ttc	caa	ccc	gag	72196
Pro	Pro	Leu	Ser	Leu	Leu	Ser	Pro	Ile	Asn	Lys	Phe	Gln	Pro	Glu	
12530					12535					12540					
gga	cat	cta	aat	cgt	ggt	gca	cgc	gcg	gcc	cta	ctt	tcg	gac	ctc	72241
Gly	His	Leu	Asn	Arg	Val	Ala	Arg	Ala	Ala	Leu	Leu	Ser	Asp	Leu	
12545					12550					12555					
aaa	cgt	aga	gtc	tgt	gcg	gat	atg	ttt	ttt	atg	acc	cga	cac	gcc	72286
Lys	Arg	Arg	Val	Cys	Ala	Asp	Met	Phe	Phe	Met	Thr	Arg	His	Ala	
12560					12565					12570					
agg	gaa	cct	agg	ctg	atc	tct	gcg	tat	ctg	tcg	gat	atg	ggt	tcg	72331
Arg	Glu	Pro	Arg	Leu	Ile	Ser	Ala	Tyr	Leu	Ser	Asp	Met	Val	Ser	
12575					12580					12585					
tgc	acc	caa	cca	tcg	gtg	atg	gta	tca	cga	ata	act	cat	aca	aac	72376
Cys	Thr	Gln	Pro	Ser	Val	Met	Val	Ser	Arg	Ile	Thr	His	Thr	Asn	
12590					12595					12600					
act	cgc	gga	cgg	cag	ggt	gac	ggg	gtg	ttg	gta	aca	aca	gca	acc	72421
Thr	Arg	Gly	Arg	Gln	Val	Asp	Gly	Val	Leu	Val	Thr	Thr	Ala	Thr	
12605					12610					12615					
tta	aaa	cgg	caa	cta	tta	cag	gga	att	tta	caa	att	gac	gac	acc	72466
Leu	Lys	Arg	Gln	Leu	Leu	Gln	Gly	Ile	Leu	Gln	Ile	Asp	Asp	Thr	
12620					12625					12630					
gcc	gct	gac	gta	cca	gta	aca	tat	ggc	gaa	atg	ggt	cta	cag	ggg	72511
Ala	Ala	Asp	Val	Pro	Val	Thr	Tyr	Gly	Glu	Met	Val	Leu	Gln	Gly	
12635					12640					12645					
aca	aac	ttg	gta	acc	gcc	ctt	gtg	atg	gga	aag	gcc	gtc	cgc	gga	72556
Thr	Asn	Leu	Val	Thr	Ala	Leu	Val	Met	Gly	Lys	Ala	Val	Arg	Gly	
12650					12655					12660					
atg	gat	gat	gta	gcc	cgc	cat	ctc	ctt	gat	ata	acc	gac	cct	aac	72601
Met	Asp	Asp	Val	Ala	Arg	His	Leu	Leu	Asp	Ile	Thr	Asp	Pro	Asn	
12665					12670					12675					
acg	tta	aac	ata	ccg	tct	ata	ccc	cca	caa	tcc	aac	tcc	gat	tca	72646

Thr 12680	Leu	Asn	Ile	Pro	Ser 12685	Ile	Pro	Pro	Gln	Ser 12690	Asn	Ser	Asp	Ser	
acg Thr 12695	aca Thr	gct Ala	ggg Gly	ctt Leu	ccg Pro 12700	gtt Val	aac Asn	gcc Ala	cgt Arg	gtt Val 12705	cct Pro	gcg Ala	gat Asp	tta Leu	72691
gtg Val 12710	att Ile	gtt Val	ggg Gly	gat Asp	aaa Lys 12715	ctt Leu	gta Val	ttc Phe	tta Leu	gaa Glu 12720	gca Ala	tta Leu	gaa Glu	cgg Arg	72736
cgg Arg 12725	gtc Val	tac Tyr	caa Gln	gct Ala	acg Thr 12730	cgc Arg	gtt Val	gcc Ala	tac Tyr	cct Pro 12735	ctt Leu	att Ile	gga Gly	aat Asn	72781
ata Ile 12740	gat Asp	att Ile	acg Thr	ttt Phe	atc Ile 12745	atg Met	cca Pro	atg Met	gga Gly	gtg Val 12750	ttt Phe	cag Gln	gca Ala	aac Asn	72826
tcc Ser 12755	atg Met	gac Asp	aga Arg	tat Tyr	aca Thr 12760	cga Arg	cac His	gcc Ala	ggc Gly	gat Asp 12765	ttt Phe	tca Ser	act Thr	gta Val	72871
tcc Ser 12770	gaa Glu	cag Gln	gat Asp	cca Pro	cgt Arg 12775	caa Gln	ttt Phe	cca Pro	ccc Pro	caa Gln 12780	ggg Gly	att Ile	ttt Phe	ttt Phe	72916
tat Tyr 12785	aat Asn	aaa Lys	gat Asp	ggg Gly	ata Ile 12790	tta Leu	aca Thr	cag Gln	ttg Leu	act Thr 12795	ctt Leu	cgt Arg	gat Asp	gca Ala	72961
atg Met 12800	ggg Gly	acc Thr	atc Ile	tgc Cys	cac His 12805	agt Ser	tca Ser	ttg Leu	ctt Leu	gat Asp 12810	gtc Val	gag Glu	gcc Ala	aca Thr	73006
ctt Leu 12815	gtt Val	gcc Ala	ctc Leu	cgc Arg	caa Gln 12820	caa Gln	cat His	tta Leu	gat Asp	cgt Arg 12825	cag Gln	tgt Cys	tat Tyr	ttt Phe	73051
ggg Gly 12830	gta Val	tac Tyr	gtg Val	gcc Ala	gag Glu 12835	ggg Gly	aca Thr	gag Glu	gac Asp	aca Thr 12840	ttg Leu	gat Asp	gtt Val	caa Gln	73096
atg Met 12845	ggg Gly	agg Arg	ttt Phe	atg Met	gaa Glu 12850	acg Thr	tgg Trp	gca Ala	gat Asp	atg Met 12855	atg Met	cct Pro	cat His	cac His	73141
cct Pro 12860	cat His	tgg Trp	gta Val	aac Asn	gaa Glu 12865	cat His	tta Leu	aca Thr	att Ile	cta Leu 12870	cag Gln	ttt Phe	ata Ile	gct Ala	73186
ccg Pro 12875	agc Ser	aac Asn	ccg Pro	cgt Arg	cta Leu 12880	agg Arg	ttt Phe	gaa Glu	tta Leu	aac Asn 12885	ccc Pro	gcc Ala	ttt Phe	gat Asp	73231
ttt Phe	ttt Phe	gtt Val	gca Ala	ccg Pro	ggg Gly	gac Asp	gta Val	gac Asp	ctt Leu	ccc Pro	gga Gly	ccg Pro	cag Gln	cgt Arg	73276

12890		12895		12900	
ccc	ccg gaa gcc atg cca	acc gtt aac gca aca	tta cgg att atc	73321	
Pro	Pro Glu Ala Met Pro	Thr Val Asn Ala Thr	Leu Arg Ile Ile		
12905		12910		12915	
aac	gga aac att ccc gtg	cct cta tgt ccc att	tca ttt cga gac	73366	
Asn	Gly Asn Ile Pro Val	Pro Leu Cys Pro Ile	Ser Phe Arg Asp		
12920		12925		12930	
tgt	cgc gga acc caa ctc	ggg ttg gga aga cat	aca atg acc ccg	73411	
Cys	Arg Gly Thr Gln Leu	Gly Leu Gly Arg His	Thr Met Thr Pro		
12935		12940		12945	
gca	acc att aaa gcc gta	aag gat aca ttt gaa	gac cgc gca tac	73456	
Ala	Thr Ile Lys Ala Val	Lys Asp Thr Phe Glu	Asp Arg Ala Tyr		
12950		12955		12960	
cca	act att ttc tac atg	cta gag gct gtt att	cat gga aac gaa	73501	
Pro	Thr Ile Phe Tyr Met	Leu Glu Ala Val Ile	His Gly Asn Glu		
12965		12970		12975	
aga	aac ttc tgt gcg tta	ctg cga ctg tta aca	cag tgt att cgc	73546	
Arg	Asn Phe Cys Ala Leu	Leu Arg Leu Leu Thr	Gln Cys Ile Arg		
12980		12985		12990	
ggg	tat tgg gag caa tcc	cac agg gtg gca ttt	gta aat aac ttt	73591	
Gly	Tyr Trp Glu Gln Ser	His Arg Val Ala Phe	Val Asn Asn Phe		
12995		13000		13005	
cac	atg tta atg tac ata	act aca tat ctc gga	aac ggt gag ctt	73636	
His	Met Leu Met Tyr Ile	Thr Thr Tyr Leu Gly	Asn Gly Glu Leu		
13010		13015		13020	
ccc	gaa gtc tgt att aat	ata tat cgg gat tta	ctg cag cat gta	73681	
Pro	Glu Val Cys Ile Asn	Ile Tyr Arg Asp Leu	Leu Gln His Val		
13025		13030		13035	
aga	gca tta cgc caa act	ata acc gat ttt aca	ata caa gga gag	73726	
Arg	Ala Leu Arg Gln Thr	Ile Thr Asp Phe Thr	Ile Gln Gly Glu		
13040		13045		13050	
ggc	cat aac ggc gag acc	tcg gaa gcg cta aat	aac atc ctt acg	73771	
Gly	His Asn Gly Glu Thr	Ser Glu Ala Leu Asn	Asn Ile Leu Thr		
13055		13060		13065	
gat	gac acg ttt att gca	cct att cta tgg gat	tgt gat gcg tta	73816	
Asp	Asp Thr Phe Ile Ala	Pro Ile Leu Trp Asp	Cys Asp Ala Leu		
13070		13075		13080	
ata	tac cgt gat gaa gcc	gcc cga gac cga ctc	ccc gca att cgt	73861	
Ile	Tyr Arg Asp Glu Ala	Ala Arg Asp Arg Leu	Pro Ala Ile Arg		
13085		13090		13095	
gta	agc ggg cga aac gga	tac caa gcc ctt cac	ttt gtg gat atg	73906	
Val	Ser Gly Arg Asn Gly	Tyr Gln Ala Leu His	Phe Val Asp Met		
13100		13105		13110	

gcc Ala 13115	ggg Gly	cat His	aac Asn	ttc Phe	caa Gln	cga Arg	cgc Arg	gat Asp	aat Asn	gtg Val	tta Leu	atc Ile	cac His	ggg Gly	73951
					13120					13125					
aga Arg 13130	ccc Pro	ggt Val	cgg Arg	gga Gly	gac Asp	acg Thr	ggt Gly	cag Gln	ggt Gly	att Ile	ccc Pro	att Ile	act Thr	cca Pro	73996
					13135					13140					
cac His 13145	cat His	gac Asp	cgt Arg	gaa Glu	tgg Trp	ggt Gly	att Ile	ctc Leu	tcc Ser	aag Lys	att Ile	tac Tyr	tac Tyr	tat Tyr	74041
					13150					13155					
att Ile 13160	gtc Val	att Ile	cct Pro	gca Ala	ttt Phe	tcc Ser	cgc Arg	ggt Gly	tcc Ser	tgt Cys	tgt Cys	aca Thr	atg Met	ggc Gly	74086
					13165					13170					
gtg Val 13175	cgt Arg	tat Tyr	gat Asp	cgc Arg	cta Leu	tac Tyr	cct Pro	gcg Ala	tta Leu	cag Gln	gca Ala	ggt Val	atc Ile	gtt Val	74131
					13180					13185					
ccg Pro 13190	gaa Glu	att Ile	ccc Pro	gct Ala	gat Asp	gaa Glu	gaa Glu	gcc Ala	cca Pro	act Thr	acc Thr	cca Pro	gaa Glu	gat Asp	74176
					13195					13200					
cca Pro 13205	aga Arg	cac His	cct Pro	ctt Leu	cac His	gca Ala	cac His	caa Gln	ctc Leu	gtt Val	ccg Pro	aac Asn	tct Ser	ctt Leu	74221
					13210					13215					
aac Asn 13220	gtt Val	tac Tyr	ttc Phe	cat His	aat Asn	gca Ala	cac His	cta Leu	acc Thr	gtt Val	gat Asp	ggt Gly	gat Asp	gca Ala	74266
					13225					13230					
ttg Leu 13235	ctc Leu	aca Thr	cta Leu	caa Gln	gag Glu	tta Leu	atg Met	gga Gly	gat Asp	atg Met	gct Ala	gaa Glu	cga Arg	acg Thr	74311
					13240					13245					
acg Thr 13250	gcc Ala	att Ile	tta Leu	gta Val	tca Ser	agc Ser	gcc Ala	ccc Pro	gat Asp	gcg Ala	gga Gly	gcc Ala	gcc Ala	acg Thr	74356
					13255					13260					
gca Ala 13265	aca Thr	acc Thr	aga Arg	aat Asn	atg Met	aga Arg	ata Ile	tat Tyr	gac Asp	gga Gly	gcg Ala	ctt Leu	tac Tyr	cat His	74401
					13270					13275					
ggc Gly 13280	ctt Leu	att Ile	atg Met	atg Met	gca Ala	tat Tyr	cag Gln	gcg Ala	tac Tyr	gat Asp	gaa Glu	acc Thr	att Ile	gca Ala	74446
					13285					13290					
acg Thr 13295	ggt Gly	act Thr	ttt Phe	ttt Phe	tat Tyr	ccc Pro	gtt Val	ccg Pro	gtc Val	aac Asn	cct Pro	ctg Leu	ttt Phe	gca Ala	74491
					13300					13305					
tgt Cys 13310	ccg Pro	gaa Glu	cat His	ttg Leu	gca Ala	tca Ser	ttg Leu	cgt Arg	gga Gly	atg Met	aca Thr	aat Asn	gct Ala	agg Arg	74536
					13315					13320					

cgg	gtt	ttg	gca	aaa	atg	gta	cca	cca	atc	cct	cct	ttt	ctg	gga	74581
Arg	Val	Leu	Ala	Lys	Met	Val	Pro	Pro	Ile	Pro	Pro	Phe	Leu	Gly	
13325					13330					13335					
gcc	aac	cac	cac	gca	act	ata	cgc	caa	ccc	gtt	gcc	tac	cat	gta	74626
Ala	Asn	His	His	Ala	Thr	Ile	Arg	Gln	Pro	Val	Ala	Tyr	His	Val	
13340					13345					13350					
acg	cat	agt	aag	tcg	gat	ttt	aat	act	ctt	aca	tat	tct	ctt	ctt	74671
Thr	His	Ser	Lys	Ser	Asp	Phe	Asn	Thr	Leu	Thr	Tyr	Ser	Leu	Leu	
13355					13360					13365					
gga	ggg	tat	ttt	aag	ttt	aca	cca	ata	tct	ctt	aca	cat	caa	cta	74716
Gly	Gly	Tyr	Phe	Lys	Phe	Thr	Pro	Ile	Ser	Leu	Thr	His	Gln	Leu	
13370					13375					13380					
cga	acg	gga	ttt	cac	ccc	ggg	att	gcc	ttt	acc	gta	gtg	cgc	cag	74761
Arg	Thr	Gly	Phe	His	Pro	Gly	Ile	Ala	Phe	Thr	Val	Val	Arg	Gln	
13385					13390					13395					
gat	cgc	ttt	gcc	aca	gag	caa	ctt	tta	tat	gcc	gag	cgt	gct	tct	74806
Asp	Arg	Phe	Ala	Thr	Glu	Gln	Leu	Leu	Tyr	Ala	Glu	Arg	Ala	Ser	
13400					13405					13410					
gaa	tcg	tac	ttt	gtc	gga	caa	atc	caa	gta	cac	cat	cat	gat	gct	74851
Glu	Ser	Tyr	Phe	Val	Gly	Gln	Ile	Gln	Val	His	His	His	Asp	Ala	
13415					13420					13425					
att	ggg	ggg	gta	aac	ttt	acc	cta	acc	caa	ccc	aga	gct	cac	gtg	74896
Ile	Gly	Gly	Val	Asn	Phe	Thr	Leu	Thr	Gln	Pro	Arg	Ala	His	Val	
13430					13435					13440					
gac	ctg	gga	gtc	ggg	tat	aca	gct	gta	tgt	gcc	aca	gca	gcc	ctg	74941
Asp	Leu	Gly	Val	Gly	Tyr	Thr	Ala	Val	Cys	Ala	Thr	Ala	Ala	Leu	
13445					13450					13455					
cga	tgc	cct	ctc	acg	gat	atg	ggc	aat	act	gcc	caa	aat	ctt	ttt	74986
Arg	Cys	Pro	Leu	Thr	Asp	Met	Gly	Asn	Thr	Ala	Gln	Asn	Leu	Phe	
13460					13465					13470					
ttt	tca	cga	gga	gga	gtg	cca	atg	tta	cat	gat	aac	gtt	acc	gaa	75031
Phe	Ser	Arg	Gly	Gly	Val	Pro	Met	Leu	His	Asp	Asn	Val	Thr	Glu	
13475					13480					13485					
tcg	ttg	cgt	cgt	ata	aca	gca	tcg	ggg	ggg	cgc	tta	aat	ccc	acc	75076
Ser	Leu	Arg	Arg	Ile	Thr	Ala	Ser	Gly	Gly	Arg	Leu	Asn	Pro	Thr	
13490					13495					13500					
gaa	ccc	cta	ccc	atc	ttc	ggc	gga	cta	cgt	cct	gct	aca	tcg	gca	75121
Glu	Pro	Leu	Pro	Ile	Phe	Gly	Gly	Leu	Arg	Pro	Ala	Thr	Ser	Ala	
13505					13510					13515					
gga	att	gca	cga	ggg	caa	gcc	tct	gtg	tgt	gag	ttt	gtg	gcc	atg	75166
Gly	Ile	Ala	Arg	Gly	Gln	Ala	Ser	Val	Cys	Glu	Phe	Val	Ala	Met	
13520					13525					13530					
ccg	gtg	tcc	act	gac	cta	caa	tat	ttt	aga	act	gca	tgc	aat	cct	75211

Pro 13535	Val	Ser	Thr	Asp	Leu 13540	Gln	Tyr	Phe	Arg	Thr 13545	Ala	Cys	Asn	Pro	
aga Arg 13550	ggt Gly	cga Arg	gca Ala	tct Ser	gga Gly 13555	atg Met	tta Leu	tat Tyr	atg Met	ggt Gly 13560	gac Asp	cgt Arg	gac Asp	gcc Ala	75256
gac Asp 13565	ata Ile	gag Glu	gct Ala	ata Ile	atg Met 13570	ttt Phe	gat Asp	cac His	aca Thr	caa Gln 13575	tcg Ser	gat Asp	ggt Val	gct Ala	75301
tat Tyr 13580	aca Thr	gat Asp	cga Arg	gca Ala	act Thr 13585	ctt Leu	aac Asn	cca Pro	tgg Trp	gca Ala 13590	tca Ser	caa Gln	aaa Lys	cat His	75346
tca Ser 13595	tac Tyr	ggt Gly	gac Asp	agg Arg	cta Leu 13600	tac Tyr	aac Asn	gga Gly	aca Thr	tac Tyr 13605	aac Asn	ctt Leu	aca Thr	ggc Gly	75391
gct Ala 13610	tct Ser	cct Pro	atc Ile	tac Tyr	agc Ser 13615	cca Pro	tgc Cys	ttt Phe	aag Lys	ttt Phe 13620	ttt Phe	aca Thr	cca Pro	gcg Ala	75436
gag Glu 13625	gtt Val	aac Asn	act Thr	aat Asn	tgt Cys 13630	aat Asn	aca Thr	ctg Leu	gat Asp	cgg Arg 13635	ctt Leu	cta Leu	atg Met	gag Glu	75481
gca Ala 13640	aag Lys	gct Ala	gtg Val	gcg Ala	tcg Ser 13645	caa Gln	agc Ser	tcc Ser	acc Thr	gac Asp 13650	act Thr	gaa Glu	tat Tyr	caa Gln	75526
ttt Phe 13655	aaa Lys	cgc Arg	cct Pro	ccc Pro	ggc Gly 13660	tct Ser	acc Thr	gaa Glu	atg Met	aca Thr 13665	cag Gln	gat Asp	ccg Pro	tgt Cys	75571
ggc Gly 13670	ctt Leu	ttt Phe	caa Gln	gaa Glu	gca Ala 13675	tat Tyr	cca Pro	cca Pro	cta Leu	tgc Cys 13680	tca Ser	agc Ser	gat Asp	gcg Ala	75616
gcc Ala 13685	atg Met	tta Leu	cga Arg	acg Thr	gct Ala 13690	cac His	gcg Ala	gga Gly	gaa Glu	acc Thr 13695	ggg Gly	gca Ala	gat Asp	gaa Glu	75661
gtt Val 13700	cac His	tta Leu	gcc Ala	caa Gln	tat Tyr 13705	ctg Leu	att Ile	cga Arg	gac Asp	gcg Ala 13710	tcg Ser	ccc Pro	ctt Leu	agg Arg	75706
gga Gly 13715	tgt Cys	ctt Leu	cct Pro	ctt Leu	ccg Pro 13720	cga Arg	taa	tttcaccacg	cccacataacc						75750
cactcccaat	aaaagccctg	tagagcgc	at	tgccatctta	cttgagattt	ggatacgctc									75810
ggccgacttg	gtctgtttca	cgcttcctta	aacaac	atg	gct	atg	cca	ttt	gag						75864
				Met	Ala	Met	Pro		Phe	Glu					13725

ata gag gta	ttg tta cca gga gaa	cta tcc ccg gcg gaa	aca tct	75909
Ile Glu Val	Leu Leu Pro Gly Glu	Leu Ser Pro Ala Glu	Thr Ser	
13730	13735	13740		
gca tta cag	aaa tgt gag gga aaa	att att acc ttc tca	acc ctg	75954
Ala Leu Gln	Lys Cys Glu Gly Lys	Ile Ile Thr Phe Ser	Thr Leu	
13745	13750	13755		
cgt cat cga	gct tca ctg gtg gat	ata gcg ctg tcg tca	tat tac	75999
Arg His Arg	Ala Ser Leu Val Asp	Ile Ala Leu Ser Ser	Tyr Tyr	
13760	13765	13770		
att aac ggt	gct cca cca gac acg	ctc tcg ctg tta gag	gca tac	76044
Ile Asn Gly	Ala Pro Pro Asp Thr	Leu Ser Leu Leu Glu	Ala Tyr	
13775	13780	13785		
cga atg cga	ttc gcg gca gtt ata	aca cgg gtc atc ccg	gga aag	76089
Arg Met Arg	Phe Ala Ala Val Ile	Thr Arg Val Ile Pro	Gly Lys	
13790	13795	13800		
ttg ttg gcg	cat gcc att ggc gtg	ggg act cct aca ccc	ggg ttg	76134
Leu Leu Ala	His Ala Ile Gly Val	Gly Thr Pro Thr Pro	Gly Leu	
13805	13810	13815		
ttt att caa	aat aca tcc ccc gtt	gat ctt tgt aat ggc	gat tac	76179
Phe Ile Gln	Asn Thr Ser Pro Val	Asp Leu Cys Asn Gly	Asp Tyr	
13820	13825	13830		
atc tgc tta	ctt cct ccg gtt ttc	ggg tcc gca gac tca	att cgc	76224
Ile Cys Leu	Leu Pro Pro Val Phe	Gly Ser Ala Asp Ser	Ile Arg	
13835	13840	13845		
ttg gac tct	gta gga ctg gaa att	gtt ttc cct tta acc	atc ccc	76269
Leu Asp Ser	Val Gly Leu Glu Ile	Val Phe Pro Leu Thr	Ile Pro	
13850	13855	13860		
cag acc tta	atg cga gaa atc atc	gcc aaa gtg gtt gca	cgg gcc	76314
Gln Thr Leu	Met Arg Glu Ile Ile	Ala Lys Val Val Ala	Arg Ala	
13865	13870	13875		
gtt gag cgc	acg gcc gcg ggt gct	caa att tta ccc cac	gaa gtt	76359
Val Glu Arg	Thr Ala Ala Gly Ala	Gln Ile Leu Pro His	Glu Val	
13880	13885	13890		
cta cga ggc	gcg gat gtc att tgt	tac aat gga agg cgt	tat gaa	76404
Leu Arg Gly	Ala Asp Val Ile Cys	Tyr Asn Gly Arg Arg	Tyr Glu	
13895	13900	13905		
ctc gaa aca	aat tta caa cat cgg	gac gga tcg gat gcg	gct att	76449
Leu Glu Thr	Asn Leu Gln His Arg	Asp Gly Ser Asp Ala	Ala Ile	
13910	13915	13920		
cgc aca ttg	gtt tta aat cta atg	ttt tcc ata aac gag	gga tgt	76494
Arg Thr Leu	Val Leu Asn Leu Met	Phe Ser Ile Asn Glu	Gly Cys	
13925	13930	13935		
ctg ctt tta	ttg gcg ctg att cca	act ttg tta gtc caa	gga gca	76539

Leu	Leu	Leu	Leu	Ala	Leu	Ile	Pro	Thr	Leu	Leu	Val	Gln	Gly	Ala	
		13940					13945					13950			
cac	gac	ggt	tat	gta	aat	tta	ttg	ata	caa	acg	gcc	aat	tgc	gtt	76584
His	Asp	Gly	Tyr	Val	Asn	Leu	Leu	Ile	Gln	Thr	Ala	Asn	Cys	Val	
		13955					13960					13965			
aga	gaa	acc	ggc	cag	tta	att	aat	ata	ccg	cca	atg	ccg	cgg	att	76629
Arg	Glu	Thr	Gly	Gln	Leu	Ile	Asn	Ile	Pro	Pro	Met	Pro	Arg	Ile	
		13970					13975					13980			
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Gln	Asp	Gly	His	Arg	Arg	Phe	Pro	Ile	Tyr	Glu	Thr	Ile	Ser	Ser	
		13985					13990					13995			
tgg	ata	tca	aca	tca	tct	aga	ctg	ggg	gat	acc	ttg	gga	act	cgc	76719
Trp	Ile	Ser	Thr	Ser	Ser	Arg	Leu	Gly	Asp	Thr	Leu	Gly	Thr	Arg	
		14000					14005					14010			
gca	att	tta	cgc	gtc	tgt	gtg	ttt	gat	gga	ccc	tct	act	gtt	cat	76764
Ala	Ile	Leu	Arg	Val	Cys	Val	Phe	Asp	Gly	Pro	Ser	Thr	Val	His	
		14015					14020					14025			
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Pro	Gly	Asp	Arg	Thr	Ala	Val	Ile	Gln	Val						
		14030					14035								
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ccataccgcc	tttaattacc	tctgtcaggt	tatccaactg	tttacaataga	tactccacgg										77047
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caggggtctac	gtaaacgtac	aacactgacg	ataatatagc	acaattcgca	acggttgacg										77587
gccgatataa	aataaacctc	tcacgggcag	tttttgtaaa	taatggccgg	tcaaacccca										77647
cacccccaga	attctgttta	cgcccaccta	caatttcctg	cacgaaggag	tcggccataa										77707

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				Met Glu Ala	His	
					14040	
ttg gca aat gaa	acc aaa cat gca ctt	tgg cat aat gat cac	aca	78226		
Leu Ala Asn Glu	Thr Lys His Ala Leu	Trp His Asn Asp His	Thr			
	14045	14050	14055			
aaa gga tta cta	cac gtt gtg ata cct	aac gcg ggg ctt att	gcg	78271		
Lys Gly Leu Leu	His Val Val Ile Pro	Asn Ala Gly Leu Ile	Ala			
	14060	14065	14070			
gcc gga ata gat	ccc gca tta ctg att	tta aag aaa ccc gga	caa	78316		
Ala Gly Ile Asp	Pro Ala Leu Leu Ile	Leu Lys Lys Pro Gly	Gln			
	14075	14080	14085			
cgc ttc aag gtt	gaa gta caa aca aga	tat cat gct aca ggt	caa	78361		
Arg Phe Lys Val	Glu Val Gln Thr Arg	Tyr His Ala Thr Gly	Gln			
	14090	14095	14100			
tgc gaa ccg tgg	tgt caa gtt ttc gcc	gcg tac att ccc gat	aac	78406		
Cys Glu Pro Trp	Cys Gln Val Phe Ala	Ala Tyr Ile Pro Asp	Asn			
	14105	14110	14115			
gcc tta aca aat	ctc tta ata cca aaa	acg gaa cca ttt gtt	tca	78451		
Ala Leu Thr Asn	Leu Leu Ile Pro Lys	Thr Glu Pro Phe Val	Ser			
	14120	14125	14130			
cac gtt ttt tcg	gcc acg cat aat tca	ggg gga ttg att tta	tca	78496		
His Val Phe Ser	Ala Thr His Asn Ser	Gly Gly Leu Ile Leu	Ser			
	14135	14140	14145			
ttg cct gtt tat	ctt agc ccc ggt tta	ttc ttt gat gca ttt	aac	78541		
Leu Pro Val Tyr	Leu Ser Pro Gly Leu	Phe Phe Asp Ala Phe	Asn			
	14150	14155	14160			
gtt gta gcg ata	cga ata aat act gga	aac gcg aag cac cgt	gat	78586		
Val Val Ala Ile	Arg Ile Asn Thr Gly	Asn Arg Lys His Arg	Asp			
	14165	14170	14175			
att tgt att atg	tat gca gaa cta atc	cca aac gga acg cgt	tat	78631		
Ile Cys Ile Met	Tyr Ala Glu Leu Ile	Pro Asn Gly Thr Arg	Tyr			
	14180	14185	14190			

ttt gct gat gga	caa cgg gta ctt tta	tta tgc aaa cag ctg	att	78676
Phe Ala Asp Gly	Gln Arg Val Leu Leu	Leu Cys Lys Gln Leu	Ile	
14195	14200	14205		
gcg tat atc cga	tgc acc cct cgt ctt	gca tcg tct ata aaa	ata	78721
Ala Tyr Ile Arg	Cys Thr Pro Arg Leu	Ala Ser Ser Ile Lys	Ile	
14210	14215	14220		
tac gca gag cat	atg gtg gca gcc atg	ggg gaa tca cac acg	tca	78766
Tyr Ala Glu His	Met Val Ala Ala Met	Gly Glu Ser His Thr	Ser	
14225	14230	14235		
aat ggg gac aat	att gga ccc gtt tca	tcc ata atc gat ctt	gat	78811
Asn Gly Asp Asn	Ile Gly Pro Val Ser	Ser Ile Ile Asp Leu	Asp	
14240	14245	14250		
cga cag tta act	tct gga ggt att gat	gac tcc cct gct gaa	aca	78856
Arg Gln Leu Thr	Ser Gly Gly Ile Asp	Asp Ser Pro Ala Glu	Thr	
14255	14260	14265		
cgc ata cag gaa	aat aat cgg gac gtc	ctt gag cta ata aaa	cgg	78901
Arg Ile Gln Glu	Asn Asn Arg Asp Val	Leu Glu Leu Ile Lys	Arg	
14270	14275	14280		
gcc gta aac att	gtt aac tcc agg cac	ccc gtc cga cct tct	agt	78946
Ala Val Asn Ile	Val Asn Ser Arg His	Pro Val Arg Pro Ser	Ser	
14285	14290	14295		
tcc cgc gtt gca	tct ggg ttg ctt caa	agt gca aag ggc cac	gga	78991
Ser Arg Val Ala	Ser Gly Leu Leu Gln	Ser Ala Lys Gly His	Gly	
14300	14305	14310		
gcg caa act tcc	aac aca gat ccg atc	aat aac ggt tcc ttt	gat	79036
Ala Gln Thr Ser	Asn Thr Asp Pro Ile	Asn Asn Gly Ser Phe	Asp	
14315	14320	14325		
ggc gtc ctt gag	ccg cct gga caa ggg	cga ttt acg gga aag	aaa	79081
Gly Val Leu Glu	Pro Pro Gly Gln Gly	Arg Phe Thr Gly Lys	Lys	
14330	14335	14340		
aac aat tcg tcc	gcc agc atc cca cct	tta caa gac gtt cta	ttg	79126
Asn Asn Ser Ser	Ala Ser Ile Pro Pro	Leu Gln Asp Val Leu	Leu	
14345	14350	14355		
ttt acc cca gct	tcg aca gaa ccc caa	agt ctt atg gaa tgg	ttc	79171
Phe Thr Pro Ala	Ser Thr Glu Pro Gln	Ser Leu Met Glu Trp	Phe	
14360	14365	14370		
gac atc tgt tat	gcc caa tta gtt agc	ggg gac act cca gca	gat	79216
Asp Ile Cys Tyr	Ala Gln Leu Val Ser	Gly Asp Thr Pro Ala	Asp	
14375	14380	14385		
ttc tgg aaa cgg	cgt ccc cta tca att	gta ccg cga cat tac	gca	79261
Phe Trp Lys Arg	Arg Pro Leu Ser Ile	Val Pro Arg His Tyr	Ala	
14390	14395	14400		

gaa tcc ccc agt	ccg ttg att gta gta	tct tac aac gga tcc	tct	79306
Glu Ser Pro Ser	Pro Leu Ile Val Val	Ser Tyr Asn Gly Ser	Ser	
14405	14410	14415		
gcc tgg gga gga	cgt att acc gga agt	cca att tta tat cac	tct	79351
Ala Trp Gly Gly	Arg Ile Thr Gly Ser	Pro Ile Leu Tyr His	Ser	
14420	14425	14430		
gca cag gct att	att gat gct gcg tgt	ata aat gcc cgg gtt	gac	79396
Ala Gln Ala Ile	Ile Asp Ala Ala Cys	Ile Asn Ala Arg Val	Asp	
14435	14440	14445		
aat ccc caa agc	cta cat gtg aca gct	cgc caa gag cta gtc	gcg	79441
Asn Pro Gln Ser	Leu His Val Thr Ala	Arg Gln Glu Leu Val	Ala	
14450	14455	14460		
cgt tta ccg ttt	ttg gct aac gtc cta	aat aat caa acc ccc	tta	79486
Arg Leu Pro Phe	Leu Ala Asn Val Leu	Asn Asn Gln Thr Pro	Leu	
14465	14470	14475		
ccc gcc ttt aaa	cca ggc gcc gaa atg	ttt tta aac cag gta	ttt	79531
Pro Ala Phe Lys	Pro Gly Ala Glu Met	Phe Leu Asn Gln Val	Phe	
14480	14485	14490		
aaa caa gcg tgt	gtg aca tcg cta acc	caa ggt ctt ata acg	gag	79576
Lys Gln Ala Cys	Val Thr Ser Leu Thr	Gln Gly Leu Ile Thr	Glu	
14495	14500	14505		
tta caa acg aac	ccg act cta caa caa	ctc atg gaa tat gat	att	79621
Leu Gln Thr Asn	Pro Thr Leu Gln Gln	Leu Met Glu Tyr Asp	Ile	
14510	14515	14520		
gca gat tct tcc	caa acg gtt att gat	gaa att gta gcc cgc	aca	79666
Ala Asp Ser Ser	Gln Thr Val Ile Asp	Glu Ile Val Ala Arg	Thr	
14525	14530	14535		
cca gac ctg att	cag act ata gtt tcg	gtg tta acg gaa atg	tca	79711
Pro Asp Leu Ile	Gln Thr Ile Val Ser	Val Leu Thr Glu Met	Ser	
14540	14545	14550		
atg gat gcg ttt	tat aac agc tcc ttg	atg tat gcg gtt ttg	gcg	79756
Met Asp Ala Phe	Tyr Asn Ser Ser Leu	Met Tyr Ala Val Leu	Ala	
14555	14560	14565		
tat ctg tca tct	gta tat aca cga cca	caa ggt ggg ggg tat	ata	79801
Tyr Leu Ser Ser	Val Tyr Thr Arg Pro	Gln Gly Gly Gly Tyr	Ile	
14570	14575	14580		
ccc tac ctt cac	gct tcc ttc cca tgc	tggt tta ggt aat cgt	tct	79846
Pro Tyr Leu His	Ala Ser Phe Pro Cys	Trp Leu Gly Asn Arg	Ser	
14585	14590	14595		
ata tat tta ttt	gac tat tat aat tca	gga ggg gaa ata ctt	aag	79891
Ile Tyr Leu Phe	Asp Tyr Tyr Asn Ser	Gly Gly Glu Ile Leu	Lys	
14600	14605	14610		
ctt tcc aag gtc	ccc gtt ccc gta gcc	tta gaa aag gtt ggt	att	79936

Leu Ser Lys Val	Pro Val Pro Val	Ala	Leu Glu Lys Val	Gly	Ile	
14615		14620		14625		
ggg aat tcc aca	caa ctg agg ggt aaa	ttt ata cgc agc gcg	gat	79981		
Gly Asn Ser Thr	Gln Leu Arg Gly Lys	Phe Ile Arg Ser Ala	Asp			
14630	14635	14640				
att gtt gat att	gga att tgt tct aag	tat tta ccc ggt caa	tgt	80026		
Ile Val Asp Ile	Gly Ile Cys Ser Lys	Tyr Leu Pro Gly Gln	Cys			
14645	14650	14655				
tac gcg tac att	tgt cta gga ttt aac	cag caa tta caa tcc	att	80071		
Tyr Ala Tyr Ile	Cys Leu Gly Phe Asn	Gln Gln Leu Gln Ser	Ile			
14660	14665	14670				
tta gtt tta ccg	ggg gga ttt gcg gca	tgt ttt tgt att acc	gat	80116		
Leu Val Leu Pro	Gly Gly Phe Ala Ala	Cys Phe Cys Ile Thr	Asp			
14675	14680	14685				
acc cta cag gca	gca cta cct gca tcg	tta atc gga cct att	cta	80161		
Thr Leu Gln Ala	Ala Leu Pro Ala Ser	Leu Ile Gly Pro Ile	Leu			
14690	14695	14700				
gac aga ttc tgc	ttc tct att ccc aac	ccc cat aaa taa		80200		
Asp Arg Phe Cys	Phe Ser Ile Pro Asn	Pro His Lys				
14705	14710					
attagtgtca ctataaaaac	ataacaccag aatctcttca	tatgtaattt tacgtcattt		80260		
ctcccgtttc caccctctct	taaaatataa aataaccggg	tgggtggcat taaaccaca		80320		
agtaccggg cggaatccg	ctagactgtt tttctgctc	atg gaa tta caa cgc		80374		
		Met Glu Leu Gln Arg				
		14715				
ata ttt ccg ctg tac	acc gct acg ggt gca gcg cgc	aaa tta acc		80419		
Ile Phe Pro Leu Tyr	Thr Ala Thr Gly Ala Ala Arg	Lys Leu Thr				
14720	14725	14730				
ccc gag gca gtt cag	aga ctc tgc gat gca tta acg	ctg gat atg		80464		
Pro Glu Ala Val Gln	Arg Leu Cys Asp Ala Leu Thr	Leu Asp Met				
14735	14740	14745				
gga tta tgg aag tcc	atc ctg acc gat ccc cgg gtg	aaa ata atg		80509		
Gly Leu Trp Lys Ser	Ile Leu Thr Asp Pro Arg Val	Lys Ile Met				
14750	14755	14760				
cga tca act gct ttt	ata act tta agg atc gct ccg	ttt atc ccc		80554		
Arg Ser Thr Ala Phe	Ile Thr Leu Arg Ile Ala Pro	Phe Ile Pro				
14765	14770	14775				
ctt caa acg gat act	act aat att gcc gtt gtt gta	gcc aca att		80599		
Leu Gln Thr Asp Thr	Thr Asn Ile Ala Val Val Val	Ala Thr Ile				
14780	14785	14790				
tac atc acg cgc cca	cgt cag atg aac tta cct ccg	aag act ttt		80644		
Tyr Ile Thr Arg Pro	Arg Gln Met Asn Leu Pro Pro	Lys Thr Phe				

14795		14800		14805	
cat gta	att gta aat ttt aat	tac gag gtc tcg tac	gca atg acg	80689	
His Val	Ile Val Asn Phe Asn	Tyr Glu Val Ser Tyr	Ala Met Thr		
14810	14815	14820			
gcg act	tta aga att tat ccg	gtt gaa aac ata gac	cat gtt ttt	80734	
Ala Thr	Leu Arg Ile Tyr Pro	Val Glu Asn Ile Asp	His Val Phe		
14825	14830	14835			
gga gca	acg ttt aag aac ccg	atc gcg tac ccc ctt	cca aca tct	80779	
Gly Ala	Thr Phe Lys Asn Pro	Ile Ala Tyr Pro Leu	Pro Thr Ser		
14840	14845	14850			
att ccg	gat cct cga gca gat	ccc acc ccc gca gat	ctt aca cca	80824	
Ile Pro	Asp Pro Arg Ala Asp	Pro Thr Pro Ala Asp	Leu Thr Pro		
14855	14860	14865			
acg cca	aac tta agc aac tac	tta caa ccc ccg cgg	ctt ccg aaa	80869	
Thr Pro	Asn Leu Ser Asn Tyr	Leu Gln Pro Pro Arg	Leu Pro Lys		
14870	14875	14880			
aat cca	tac gca tgt aaa gtt	att tct ccg gga gtg	tgg tgg tca	80914	
Asn Pro	Tyr Ala Cys Lys Val	Ile Ser Pro Gly Val	Trp Trp Ser		
14885	14890	14895			
gac gaa	cga agg cgt tta tat	gta ctg gct atg gaa	cct aat tta	80959	
Asp Glu	Arg Arg Arg Leu Tyr	Val Leu Ala Met Glu	Pro Asn Leu		
14900	14905	14910			
ata ggg	cta tgt ccc gcc gga	tgg cat gct cgg ata	ctt ggc tct	81004	
Ile Gly	Leu Cys Pro Ala Gly	Trp His Ala Arg Ile	Leu Gly Ser		
14915	14920	14925			
gta tta	aat cga ctc ctc agc	cat gcg gac gga tgt	gat gaa tgt	81049	
Val Leu	Asn Arg Leu Leu Ser	His Ala Asp Gly Cys	Asp Glu Cys		
14930	14935	14940			
aat cat	aga gtt cac gtg ggg	gca ctg tat gcg tta	ccc cat gtc	81094	
Asn His	Arg Val His Val Gly	Ala Leu Tyr Ala Leu	Pro His Val		
14945	14950	14955			
aca aat	cat gcg gaa ggt tgt	gtg tgt tgg gct ccg	tgt atg tgg	81139	
Thr Asn	His Ala Glu Gly Cys	Val Cys Trp Ala Pro	Cys Met Trp		
14960	14965	14970			
aga aag	gcc ggt cag cgg gaa	tta aaa gtg gag gta	gac att ggc	81184	
Arg Lys	Ala Gly Gln Arg Glu	Leu Lys Val Glu Val	Asp Ile Gly		
14975	14980	14985			
gcc acg	cag gtt ctt ttt gta	gat gtc acc acc tgc	att cga att	81229	
Ala Thr	Gln Val Leu Phe Val	Asp Val Thr Thr Cys	Ile Arg Ile		
14990	14995	15000			
acg agt	act aaa aat cct cgc	att acc gca aat ctt	ggc gac gtt	81274	
Thr Ser	Thr Lys Asn Pro Arg	Ile Thr Ala Asn Leu	Gly Asp Val		
15005	15010	15015			

ata gcg	gga acc aac gcc agt	ggt ctc tct gta cca	gta aat tca	81319		
Ile Ala	Gly Thr Asn Ala Ser	Gly Leu Ser Val Pro	Val Asn Ser			
15020	15025	15030				
tct ggg	tgg cag ctt tat atg	ttt gga gaa aca tta	agc cgg gct	81364		
Ser Gly	Trp Gln Leu Tyr Met	Phe Gly Glu Thr Leu	Ser Arg Ala			
15035	15040	15045				
att att	aac ggc tgt ggt ctg	ctt cag cga att tgc	ttc ccc gag	81409		
Ile Ile	Asn Gly Cys Gly Leu	Leu Gln Arg Ile Cys	Phe Pro Glu			
15050	15055	15060				
aca caa	aga tta tcg ggt gaa	ccg gaa cct aca acc	acc tag	81451		
Thr Gln	Arg Leu Ser Gly Glu	Pro Glu Pro Thr Thr	Thr			
15065	15070	15075				
tataccttaa	ctcaaccgcc	gttgtggaaa	ggtatatgtc	aacattttaca	gtaatatatt	81511
aaaggttaaa	tttataaaac	actcacgttt	gtgttgtgac	ttgacgcgaa	caccgctgtg	81571
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gtcatcttac	gtactcg	tta	cgtatata	tatc	ataaacattt	tcagggccgc	attcattcac	82711								
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	Met	Ser	Gly	His	Thr Pro Thr Tyr Ala	Ser His Arg Arg										
				15080		15085										
aac	cgt	gtc	aaa	cta	ggt	gag	gcg	cat	aac	cgc	gcg	ggg	tta	ttt	82802	
Asn	Arg	Val	Lys	Leu	Val	Glu	Ala	His	Asn	Arg	Ala	Gly	Leu	Phe		
15090					15095					15100						
aaa	gaa	cg	g	acc	ctc	gat	cta	atc	cgt	ggg	ggt	gcg	agt	gta	caa	82847
Lys	Glu	Arg	Thr	Leu	Asp	Leu	Ile	Arg	Gly	Gly	Ala	Ser	Val	Gln		
15105					15110					15115						
gat	cca	gca	ttt	gtg	tat	gcc	ttt	act	gct	gca	aaa	gag	gcc	tgc	82892	
Asp	Pro	Ala	Phe	Val	Tyr	Ala	Phe	Thr	Ala	Ala	Lys	Glu	Ala	Cys		
15120					15125					15130						
gcc	gat	tta	aat	aac	cag	ctc	cg	c	tct	gca	gct	cg	ata	gct	tca	82937
Ala	Asp	Leu	Asn	Asn	Gln	Leu	Arg	Ser	Ala	Ala	Arg	Ile	Ala	Ser		
15135					15140					15145						
gtt	gaa	cag	aag	att	cgt	gat	ata	caa	tcc	aag	gtt	gag	gaa	caa	82982	
Val	Glu	Gln	Lys	Ile	Arg	Asp	Ile	Gln	Ser	Lys	Val	Glu	Glu	Gln		
15150					15155					15160						
aca	agt	att	caa	cag	att	tta	aat	aca	aac	aga	cg	tat	ata	gca	83027	
Thr	Ser	Ile	Gln	Gln	Ile	Leu	Asn	Thr	Asn	Arg	Arg	Tyr	Ile	Ala		
15165					15170					15175						
ccc	gat	ttt	att	cg	ggt	ttg	gat	aaa	aca	gaa	gac	gat	aat	acc	83072	
Pro	Asp	Phe	Ile	Arg	Gly	Leu	Asp	Lys	Thr	Glu	Asp	Asp	Asn	Thr		
15180					15185					15190						
gat	aat	ata	gac	aga	ctg	gaa	gac	g	gta	gga	ccg	aac	atc	gaa	83117	
Asp	Asn	Ile	Asp	Arg	Leu	Glu	Asp	Ala	Val	Gly	Pro	Asn	Ile	Glu		
15195					15200					15205						
cac	gaa	aat	cat	act	tgg	ttt	gga	gaa	gac	gac	gaa	gcg	tta	ctt	83162	
His	Glu	Asn	His	Thr	Trp	Phe	Gly	Glu	Asp	Asp	Glu	Ala	Leu	Leu		
15210					15215					15220						
aca	caa	tgg	atg	ctg	acg	aca	cac	ccc	cca	acc	tcc	aaa	tat	ctc	83207	
Thr	Gln	Trp	Met	Leu	Thr	Thr	His	Pro	Pro	Thr	Ser	Lys	Tyr	Leu		
15225					15230					15235						
caa	ctg	cag	gac	ctt	tgc	gtt	ccc	acc	aca	ata	ccg	acg	gac	atg	83252	
Gln	Leu	Gln	Asp	Leu	Cys	Val	Pro	Thr	Thr	Ile	Pro	Thr	Asp	Met		
15240					15245					15250						
aac	caa	atg	caa	ccg	cag	ccg	atc	agc	aag	aac	gag	aat	cca	cca	83297	
Asn	Gln	Met	Gln	Pro	Gln	Pro	Ile	Ser	Lys	Asn	Glu	Asn	Pro	Pro		
15255					15260					15265						
acc	cca	cac	acg	gat	gtg	taa	atcatccatg	ggccaatccg	tcaactgcaa	83348						
Thr	Pro	His	Thr	Asp	Val											
15270					15275											

acg cta cag aag aca	tca ccg aac atg gac	tgt cgc ggg atg aca	84846
Thr Leu Gln Lys Thr	Ser Pro Asn Met Asp	Cys Arg Gly Met Thr	
15325	15330	15335	
gcg ggt att ttt att	cgt tta tcc cac atg	tat aaa att cta aca	84891
Ala Gly Ile Phe Ile	Arg Leu Ser His Met	Tyr Lys Ile Leu Thr	
15340	15345	15350	
act ctg gag tct cca	aat gat gta acc tac	aca aca ccc ggt tct	84936
Thr Leu Glu Ser Pro	Asn Asp Val Thr Tyr	Thr Thr Pro Gly Ser	
15355	15360	15365	
acc aac gca ctg ttc	ttt aag acg tcc aca	cag cct cag gag ccg	84981
Thr Asn Ala Leu Phe	Phe Lys Thr Ser Thr	Gln Pro Gln Glu Pro	
15370	15375	15380	
cgt ccg gaa gag tta	gca tcc aaa tta acc	caa gac gac att aaa	85026
Arg Pro Glu Glu Leu	Ala Ser Lys Leu Thr	Gln Asp Asp Ile Lys	
15385	15390	15395	
cgt att cta tta aca	ata gaa tcg gag act	cgt ggt cag ggc gac	85071
Arg Ile Leu Leu Thr	Ile Glu Ser Glu Thr	Arg Gly Gln Gly Asp	
15400	15405	15410	
aat gcc att tgg aca	cta ctc aga cga aat	tta atc acc gca tca	85116
Asn Ala Ile Trp Thr	Leu Leu Arg Arg Asn	Leu Ile Thr Ala Ser	
15415	15420	15425	
act ctt aaa tgg agt	gta tct gga ccc gtc	att cca cct cag tgg	85161
Thr Leu Lys Trp Ser	Val Ser Gly Pro Val	Ile Pro Pro Gln Trp	
15430	15435	15440	
ttt tac cac cat aac	act aca gac aca tac	ggg gat gcg gcg gca	85206
Phe Tyr His His Asn	Thr Thr Asp Thr Tyr	Gly Asp Ala Ala Ala	
15445	15450	15455	
atg gcg ttt gga aaa	acc aac gaa ccg gcg	gca cga gcg ata gtt	85251
Met Ala Phe Gly Lys	Thr Asn Glu Pro Ala	Ala Arg Ala Ile Val	
15460	15465	15470	
gaa gca ttg ttt ata	gat ccg gct gat atc	cgt act cct gat cat	85296
Glu Ala Leu Phe Ile	Asp Pro Ala Asp Ile	Arg Thr Pro Asp His	
15475	15480	15485	
tta acg cca gaa gct	aca act aag ttt ttt	aat ttt gac atg ctc	85341
Leu Thr Pro Glu Ala	Thr Thr Lys Phe Phe	Asn Phe Asp Met Leu	
15490	15495	15500	
aat acc aaa tct cca	agt ctc ctt gtg ggt	aca cca aga atc gga	85386
Asn Thr Lys Ser Pro	Ser Leu Leu Val Gly	Thr Pro Arg Ile Gly	
15505	15510	15515	
acg tat gaa tgt gga	ctt tta atc gac gtt	cga acg gga ctt ata	85431
Thr Tyr Glu Cys Gly	Leu Leu Ile Asp Val	Arg Thr Gly Leu Ile	
15520	15525	15530	
ggc gcg tcg ttg gac	gtt ctt gta tgt gac	agg gac cct tta act	85476

Gly	Ala	Ser	Leu	Asp	Val	Leu	Val	Cys	Asp	Arg	Asp	Pro	Leu	Thr	
				15535					15540					15545	
ggc	acc	cta	aat	ccc	cac	cct	gca	gaa	acc	gac	att	tca	ttt	ttt	85521
Gly	Thr	Leu	Asn	Pro	His	Pro	Ala	Glu	Thr	Asp	Ile	Ser	Phe	Phe	
				15550					15555					15560	
gaa	att	aaa	tgt	cgt	gct	aaa	tac	ctc	ttt	gat	cca	gat	gac	aaa	85566
Glu	Ile	Lys	Cys	Arg	Ala	Lys	Tyr	Leu	Phe	Asp	Pro	Asp	Asp	Lys	
				15565					15570					15575	
aat	aac	ccg	ctc	ggc	cgg	acg	tac	acc	acg	tta	ata	aat	aga	cct	85611
Asn	Asn	Pro	Leu	Gly	Arg	Thr	Tyr	Thr	Thr	Leu	Ile	Asn	Arg	Pro	
				15580					15585					15590	
aca	atg	gca	aat	cta	cgg	gac	ttt	tta	tat	act	ata	aaa	aac	cca	85656
Thr	Met	Ala	Asn	Leu	Arg	Asp	Phe	Leu	Tyr	Thr	Ile	Lys	Asn	Pro	
				15595					15600					15605	
tgt	gta	agc	ttc	ttt	gga	ccc	tca	gca	aac	cca	agt	aca	cgc	gag	85701
Cys	Val	Ser	Phe	Phe	Gly	Pro	Ser	Ala	Asn	Pro	Ser	Thr	Arg	Glu	
				15610					15615					15620	
gcc	tta	ata	acg	gat	cac	gtt	gaa	tg	aaa	cgt	tta	gga	ttt	aaa	85746
Ala	Leu	Ile	Thr	Asp	His	Val	Glu	Trp	Lys	Arg	Leu	Gly	Phe	Lys	
				15625					15630					15635	
ggc	ggg	agg	gcc	ctt	aca	gaa	ctc	gac	gcc	cat	cat	ttg	ggc	ctc	85791
Gly	Gly	Arg	Ala	Leu	Thr	Glu	Leu	Asp	Ala	His	His	Leu	Gly	Leu	
				15640					15645					15650	
aat	cgg	aca	atc	tca	tcc	cga	gtg	tg	gta	ttt	aat	gat	ccg	gac	85836
Asn	Arg	Thr	Ile	Ser	Ser	Arg	Val	Trp	Val	Phe	Asn	Asp	Pro	Asp	
				15655					15660					15665	
ata	caa	aag	ggg	aca	att	aca	acc	att	gca	tg	gcc	act	gga	gat	85881
Ile	Gln	Lys	Gly	Thr	Ile	Thr	Thr	Ile	Ala	Trp	Ala	Thr	Gly	Asp	
				15670					15675					15680	
acg	gct	ctt	caa	att	cct	gta	ttt	gcc	aat	ccg	cgg	cac	gct	aac	85926
Thr	Ala	Leu	Gln	Ile	Pro	Val	Phe	Ala	Asn	Pro	Arg	His	Ala	Asn	
				15685					15690					15695	
ttt	aaa	caa	att	gcc	gta	caa	acc	tat	gta	tta	tcc	ggc	tac	ttt	85971
Phe	Lys	Gln	Ile	Ala	Val	Gln	Thr	Tyr	Val	Leu	Ser	Gly	Tyr	Phe	
				15700					15705					15710	
cca	gcg	cta	aaa	cta	cgg	ccc	ttc	ctt	gtc	acc	ttt	ata	gga	cgt	86016
Pro	Ala	Leu	Lys	Leu	Arg	Pro	Phe	Leu	Val	Thr	Phe	Ile	Gly	Arg	
				15715					15720					15725	
gtg	cgc	cga	cca	cac	gag	gtg	gga	gtc	cca	ttg	cgc	gtc	gat	aca	86061
Val	Arg	Arg	Pro	His	Glu	Val	Gly	Val	Pro	Leu	Arg	Val	Asp	Thr	
				15730					15735					15740	
caa	gcg	gct	gcc	att	tac	gaa	tat	aac	tg	ccg	act	atc	cca	ccc	86106
Gln	Ala	Ala	Ala	Ile	Tyr	Glu	Tyr	Asn	Trp	Pro	Thr	Ile	Pro	Pro	

15745	15750	15755	
cac tgt gcg gtt ccg	gtt ata gcc gtt cta	acg cct atc gaa gtt	86151
His Cys Ala Val Pro	Val Ile Ala Val Leu	Thr Pro Ile Glu Val	
15760	15765	15770	
gat gtg cct aga gtg	aca caa ata ctt aaa	gac aca gga aac aac	86196
Asp Val Pro Arg Val	Thr Gln Ile Leu Lys	Asp Thr Gly Asn Asn	
15775	15780	15785	
gcg att aca tca gca	ttg cgg tca ttg cga	tgg gac aat ctt cat	86241
Ala Ile Thr Ser Ala	Leu Arg Ser Leu Arg	Trp Asp Asn Leu His	
15790	15795	15800	
cca gcg gtc gag gag	gaa tct gtg gat tgt	gca aac ggt aca acg	86286
Pro Ala Val Glu Glu	Glu Ser Val Asp Cys	Ala Asn Gly Thr Thr	
15805	15810	15815	
agc ttg tta cgt gca	acg gag aaa ccg ttg	ctt tga actcagagtt	86332
Ser Leu Leu Arg Ala	Thr Glu Lys Pro Leu	Leu	
15820	15825		
ctttgaagac tttgactttg	atgagaatgt aacagaggac	gccgataaat ccacacaacg	86392
ccgcccacga gtgatcgatg	taacacccaaa acgaaaacct	tcgggaaaga gctcccattc	86452
caaatgcgca aaatgttaaa	ccctgataaa ccctgataaa	cgttctaata aaaacatcaa	86512
atcatggttg gttactgtga	atgtttgttt tattgcttgg	gggtttataa gtacaacca	86572
cgctactccc acccactggt	tgatcgctcg tataacagct	catcctcgcg gtccgtttca	86632
tatgttgagt cattttcata	gacgtagccg tagccttgtg	atgggtaatt tgtgcggcga	86692
gaattttctat gtgcaggttt	tacttttctgt atgtatcccc	gtaccgcgtc ggggtactctt	86752
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gcggcggttc ccaacgtagc	acaggccacg agcgttccca	gggacgggtcc tattaacacg	86992
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aatgtagaca tggccacgga	caccgatgac cacagtcccg	tatgtagatg attcgccacc	87112
acaagttcca gcattaatga	tacaaatagg atacatatcg	ccatcaacgc agccatcaaa	87172
ttcacgaaca ctgcgcgct	aggccccgca aggcgatata	aaaagacgct ctgctgtcgt	87232
aaatttgca cgcgttttat	gttcgtttcg tccaattttc	cgcgtccaca aaaatacgtt	87292
gtaaatatta cacttgctgc	aaaatgtcca agatataatg	tagcagccac gccgatttgc	87352
ttgtaagcta ataataacac	aacggcgttt aataaccaca	atgacaaaag accccaaaaa	87412

agtgttgtgg gatctacaac taaccatgca acaccggagc tttgccggac acgttgattt	87472
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attaacgtag ccaggagcat taccgcaccc aaagtgaaca tcatcacctg aattatccaa	87772
attcgccaat taagcgtatc catttgatga tctaacgctt ccacctcggg tgtcgtggtg	87832
tcgtacggcg agactttttc agaacgcggc cccttctttt gagttccc atg tct ccc	87889
	Met Ser Pro
aac acc ggg gag agc aac gcc gcc gtc tat gcg tcc agt aca cag	87934
Asn Thr Gly Glu Ser Asn Ala Ala Val Tyr Ala Ser Ser Thr Gln	
15830 15835 15840	
ctc gcg cgg gcg tta tat gga ggg gat ctg gtt tcg tgg att aaa	87979
Leu Ala Arg Ala Leu Tyr Gly Gly Asp Leu Val Ser Trp Ile Lys	
15845 15850 15855	
cac acc cac ccg gga att agc ctg gaa ctg caa ttg gat gtt cca	88024
His Thr His Pro Gly Ile Ser Leu Glu Leu Gln Leu Asp Val Pro	
15860 15865 15870	
gta aaa cta ata aaa cct ggt atg tca caa act cgc ccg gta acc	88069
Val Lys Leu Ile Lys Pro Gly Met Ser Gln Thr Arg Pro Val Thr	
15875 15880 15885	
gtc gta cgt gcc cct atg ggc tct ggt aaa aca aca gcc ttg ctt	88114
Val Val Arg Ala Pro Met Gly Ser Gly Lys Thr Thr Ala Leu Leu	
15890 15895 15900	
gag tgg ctt caa cac gcg tta aag gca gat att agc gta ctg gtt	88159
Glu Trp Leu Gln His Ala Leu Lys Ala Asp Ile Ser Val Leu Val	
15905 15910 15915	
gtc tca tgt cgc cgt agc ttt acc cag acg ttg att caa cgg ttt	88204
Val Ser Cys Arg Arg Ser Phe Thr Gln Thr Leu Ile Gln Arg Phe	
15920 15925 15930	
aac gat gca ggc ctc tcc gga ttc gta aca tat ttg aca tcc gag	88249
Asn Asp Ala Gly Leu Ser Gly Phe Val Thr Tyr Leu Thr Ser Glu	
15935 15940 15945	
aca tat att atg ggt ttt aaa cgt ttg att gtg caa ctt gaa agc	88294
Thr Tyr Ile Met Gly Phe Lys Arg Leu Ile Val Gln Leu Glu Ser	
15950 15955 15960	
cta cac cgc gta tcc agc gaa gct atc gac agc tac gac gta tta	88339
Leu His Arg Val Ser Ser Glu Ala Ile Asp Ser Tyr Asp Val Leu	

15965		15970		15975	
ata	ctg gat gag gta atg	tca gtg att gga caa	tta tac tcc ccc	88384	
Ile	Leu Asp Glu Val Met	Ser Val Ile Gly Gln	Leu Tyr Ser Pro		
15980		15985		15990	
aca	atg aga cgt ctt tcc	gcg gtt gat agc cta	tta tat cgt ctt	88429	
Thr	Met Arg Arg Leu Ser	Ala Val Asp Ser Leu	Leu Tyr Arg Leu		
15995		16000		16005	
tta	aat cgc tgt tct caa	att atc gcg atg gat	gct aca gta aac	88474	
Leu	Asn Arg Cys Ser Gln	Ile Ile Ala Met Asp	Ala Thr Val Asn		
16010		16015		16020	
tcg	cag ttt att gat tta	atc tcc gga ttg cgt	gga gat gaa aac	88519	
Ser	Gln Phe Ile Asp Leu	Ile Ser Gly Leu Arg	Gly Asp Glu Asn		
16025		16030		16035	
ata	cac aca att gtg tgt	aca tac gcg gga gtt	ggg ttc tcc gga	88564	
Ile	His Thr Ile Val Cys	Thr Tyr Ala Gly Val	Gly Phe Ser Gly		
16040		16045		16050	
aga	act tgc acg atc ctg	cgt gat atg ggc atc	gac acg ctt gtg	88609	
Arg	Thr Cys Thr Ile Leu	Arg Asp Met Gly Ile	Asp Thr Leu Val		
16055		16060		16065	
cga	gtc att aaa cga tct	cct gaa cac gag gat	gta cgt acc ata	88654	
Arg	Val Ile Lys Arg Ser	Pro Glu His Glu Asp	Val Arg Thr Ile		
16070		16075		16080	
cac	caa cta cgt gga aca	ttt ttt gac gaa cta	gca cta cga tta	88699	
His	Gln Leu Arg Gly Thr	Phe Phe Asp Glu Leu	Ala Leu Arg Leu		
16085		16090		16095	
caa	tgt ggg cat aac atc	tgt ata ttt tca tca	act tta tcg ttt	88744	
Gln	Cys Gly His Asn Ile	Cys Ile Phe Ser Ser	Thr Leu Ser Phe		
16100		16105		16110	
tcg	gag cta gtt gct cag	ttt tgt gca ata ttt	aca gac tct att	88789	
Ser	Glu Leu Val Ala Gln	Phe Cys Ala Ile Phe	Thr Asp Ser Ile		
16115		16120		16125	
ctt	att tta aac tca act	cgg ccc cta tgt aat	gta aac gaa tgg	88834	
Leu	Ile Leu Asn Ser Thr	Arg Pro Leu Cys Asn	Val Asn Glu Trp		
16130		16135		16140	
aaa	cat ttt cgc gtg ttg	gtg tac act acc gtc	gtg acc gtt gga	88879	
Lys	His Phe Arg Val Leu	Val Tyr Thr Thr Val	Val Thr Val Gly		
16145		16150		16155	
ttg	agt ttt gac atg gct	cat ttt cat agc atg	ttt gct tac ata	88924	
Leu	Ser Phe Asp Met Ala	His Phe His Ser Met	Phe Ala Tyr Ile		
16160		16165		16170	
aag	cca atg tca tat ggg	ccg gat atg gta tcg	gtc tac cag tca	88969	
Lys	Pro Met Ser Tyr Gly	Pro Asp Met Val Ser	Val Tyr Gln Ser		
16175		16180		16185	

tta Leu 16190	ggg Gly	cgt Arg	gta Val	cgt Arg	tta Leu 16195	ttg Leu	cta Leu	ctt Leu	aat Asn	gaa Glu 16200	gtt Val	ttg Leu	atg Met	tac Tyr	89014
gtc Val 16205	gat Asp	ggc Gly	tca Ser	agg Arg	acc Thr 16210	aga Arg	tgc Cys	gga Gly	ccc Pro	ctg Leu 16215	ttc Phe	tcg Ser	cca Pro	atg Met	89059
tta Leu 16220	cta Leu	aac Asn	ttt Phe	acc Thr	atc Ile 16225	gca Ala	aat Asn	aaa Lys	ttt Phe	caa Gln 16230	tgg Trp	ttt Phe	cct Pro	aca Thr	89104
cac His 16235	acc Thr	caa Gln	ata Ile	act Thr	aac Asn 16240	aaa Lys	ctg Leu	tgc Cys	tgt Cys	gca Ala 16245	ttt Phe	agg Arg	caa Gln	cga Arg	89149
tgt Cys 16250	gca Ala	aat Asn	gca Ala	ttt Phe	aca Thr 16255	cgc Arg	tcg Ser	aac Asn	acc Thr	cat His 16260	ctc Leu	ttc Phe	tca Ser	aga Arg	89194
ttt Phe 16265	aaa Lys	tac Tyr	aaa Lys	cac His	ctt Leu 16270	ttc Phe	gag Glu	aga Arg	tgc Cys	tct Ser 16275	ctt Leu	tgg Trp	agt Ser	tta Leu	89239
gcc Ala 16280	gat Asp	agc Ser	att Ile	aat Asn	atc Ile 16285	tta Leu	caa Gln	act Thr	ctt Leu	ttg Leu 16290	gcc Ala	tct Ser	aac Asn	caa Gln	89284
att Ile 16295	ttg Leu	gtt Val	gta Val	ttg Leu	gat Asp 16300	ggc Gly	atg Met	ggg Gly	cca Pro	ata Ile 16305	acg Thr	gac Asp	gtt Val	tcc Ser	89329
cca Pro 16310	gtt Val	caa Gln	ttt Phe	tgt Cys	gca Ala 16315	ttt Phe	ata Ile	cac His	gat Asp	ctc Leu 16320	aga Arg	cat His	agc Ser	gct Ala	89374
aac Asn 16325	gcc Ala	gta Val	gct Ala	tcc Ser	tgt Cys 16330	atg Met	cgt Arg	tct Ser	ctt Leu	aga Arg 16335	cag Gln	gac Asp	aat Asn	gac Asp	89419
agc Ser 16340	tgc Cys	ttg Leu	acc Thr	gat Asp	ttt Phe 16345	ggc Gly	cct Pro	tcc Ser	gga Gly	ttt Phe 16350	atg Met	gcc Ala	gat Asp	aac Asn	89464
att Ile 16355	acc Thr	gcg Ala	ttt Phe	atg Met	gaa Glu 16360	aag Lys	tat Tyr	ctt Leu	atg Met	gag Glu 16365	tca Ser	att Ile	aat Asn	acc Thr	89509
gaa Glu 16370	gaa Glu	caa Gln	att Ile	aaa Lys	gta Val 16375	ttt Phe	aaa Lys	gcc Ala	ctt Leu	gca Ala 16380	tgt Cys	cca Pro	ata Ile	gaa Glu	89554
cag Gln 16385	cct Pro	aga Arg	cta Leu	gtc Val	aat Asn 16390	acg Thr	gca Ala	ata Ile	ttg Leu	ggg Gly 16395	gcg Ala	tgt Cys	ata Ile	cga Arg	89599

ata Ile 16400	cct Pro	gaa Glu	gcg Ala	ttg Leu	gaa Glu 16405	gca Ala	ttt Phe	gac Asp	gta Val	ttt Phe 16410	caa Gln	aaa Lys	ata Ile	tac Tyr	89644
acg Thr 16415	cac His	tac Tyr	gct Ala	tcc Ser	ggg Gly 16420	tgg Trp	ttt Phe	ccc Pro	gtc Val	ctg Leu 16425	gac Asp	aaa Lys	acc Thr	ggg Gly	89689
gaa Glu 16430	ttt Phe	agc Ser	atc Ile	gcg Ala	act Thr 16435	ata Ile	act Thr	acc Thr	gcc Ala	cca Pro 16440	aat Asn	tta Leu	acc Thr	aca Thr	89734
cat His 16445	tgg Trp	gag Glu	ctg Leu	ttt Phe	cgc Arg 16450	cgt Arg	tgt Cys	gcc Ala	tat Tyr	att Ile 16455	gca Ala	aaa Lys	aca Thr	ctc Leu	89779
aag Lys 16460	tgg Trp	aat Asn	ccg Pro	tcc Ser	acc Thr 16465	gaa Glu	ggc Gly	tgt Cys	gta Val	aca Thr 16470	caa Gln	ggt Val	ttg Leu	gat Asp	89824
acg Thr 16475	gac Asp	att Ile	aat Asn	aca Thr	ctt Leu 16480	ttc Phe	aat Asn	caa Gln	cac His	ggg Gly 16485	gat Asp	tcg Ser	ctg Leu	gct Ala	89869
caa Gln 16490	cta Leu	ata Ile	ttt Phe	gag Glu	gtt Val 16495	atg Met	cgc Arg	tgt Cys	aac Asn	gtt Val 16500	act Thr	gac Asp	gct Ala	aag Lys	89914
att Ile 16505	ata Ile	tta Leu	aac Asn	cgc Arg	ccg Pro 16510	gtt Val	tgg Trp	cga Arg	aca Thr	acc Thr 16515	gga Gly	ttc Phe	tta Leu	gat Asp	89959
gga Gly 16520	tgc Cys	cat His	aat Asn	caa Gln	tgc Cys 16525	ttc Phe	cgt Arg	cca Pro	atc Ile	cct Pro 16530	aca Thr	aaa Lys	cac His	gaa Glu	90004
tat Tyr 16535	aac Asn	att Ile	gct Ala	cta Leu	ttt Phe 16540	cgt Arg	tta Leu	att Ile	tgg Trp	gaa Glu 16545	caa Gln	tta Leu	ttt Phe	ggc Gly	90049
gcc Ala 16550	cgc Arg	gta Val	act Thr	aaa Lys	agt Ser 16555	acc Thr	cag Gln	acc Thr	ttt Phe	ccg Pro 16560	gga Gly	agt Ser	act Thr	cgt Arg	90094
gtg Val 16565	aaa Lys	aac Asn	cta Leu	aaa Lys	aaa Lys 16570	aaa Lys	gat Asp	cta Leu	gaa Glu	act Thr 16575	tta Leu	ctt Leu	gat Asp	tca Ser	90139
att Ile 16580	aac Asn	gtg Val	gat Asp	cgt Arg	tct Ser 16585	gca Ala	tgt Cys	cgt Arg	acc Thr	tac Tyr 16590	cgc Arg	cag Gln	ttg Leu	tat Tyr	90184
aac Asn 16595	ctg Leu	ctt Leu	atg Met	agc Ser	cag Gln 16600	cgc Arg	cat His	tcg Ser	ttc Phe	tct Ser 16605	caa Gln	cag Gln	cgt Arg	tac Tyr	90229
aaa	att	act	gcc	ccc	gct	tgg	gca	cgc	cac	gtg	tat	ttt	caa	gca	90274

Lys 16610	Ile Thr Ala Pro Ala 16615	Trp Ala Arg His Val 16620	Tyr Phe Gln Ala	
cat His 16625	caa atg cac ttg gcc Gln Met His Leu Ala 16630	ccg cat gcc gaa gcc Pro His Ala Glu Ala 16635	atg cta caa tta Met Leu Gln Leu	90319
gcg Ala 16640	cta tcg gaa ctg tcc Leu Ser Glu Leu Ser 16645	ccg gga tcg tgg ccg Pro Gly Ser Trp Pro 16650	cggtataaacggg Arg Ile Asn Gly	90364
gcg Ala 16655	gta aat ttt gaa agt Val Asn Phe Glu Ser 16660	tta taa cccgttaata ccatatatgg Leu		90408
acatccatag gggggggttac ataaatacta agcctctgta caacacaaag ggcctctaac				90468
aatgcactga accacaacca agct atg gac gca acg cag att acc ttg Met Asp Ala Thr Gln Ile Thr Leu 16665				90516
gtt Val 16670	aga gaa agc gga cac Arg Glu Ser Gly His 16675	att tgt gcc gca agc Ile Cys Ala Ala Ser 16680	ata tac aca tcc Ile Tyr Thr Ser	90561
tggt Trp 16685	aca cag tcc gga caa Thr Gln Ser Gly Gln 16690	tta aca cag aac ggt Leu Thr Gln Asn Gly 16695	ctt tcc gtgtta Leu Ser Val Leu	90606
tac Tyr 16700	tac tta tta tgc aaa Tyr Leu Leu Cys Lys 16705	aac tca tgt ggg aaa Asn Ser Cys Gly Lys 16710	tac gtc cct aag Tyr Val Pro Lys	90651
ttt Phe 16715	gcc gaa att acc gta Ala Glu Ile Thr Val 16720	caa caa gag gat tta Gln Gln Glu Asp Leu 16725	tgt cgc tac tcc Cys Arg Tyr Ser	90696
agg Arg 16730	cat ggg ggg agt gtt His Gly Gly Ser Val 16735	tct gcg gca acg ttt Ser Ala Ala Thr Phe 16740	gcgtctatctgc Ala Ser Ile Cys	90741
agg Arg 16745	gcg gcg tcc tcg gct Ala Ala Ser Ser Ala 16750	gcg tta gac gcc tgg Ala Leu Asp Ala Trp 16755	ccc ctt gaa cca Pro Leu Glu Pro	90786
ctg Leu 16760	ggt aac gca gac acc Gly Asn Ala Asp Thr 16765	tggtcggtctc Trp Arg Cys Leu His 16770	ggc act gcc ctg Gly Thr Ala Leu	90831
gcc Ala 16775	act tta cgg cgc gta Thr Leu Arg Arg Val 16780	tta ggg ttt aaa tcg Leu Gly Phe Lys Ser 16785	ttt tat tcg cca Phe Tyr Ser Pro	90876
gta Val 16790	aca ttc gag act gat Thr Phe Glu Thr Asp 16795	acg aat aca ggt ctt Thr Asn Thr Gly Leu 16800	ctgttaaaaca Leu Leu Lys Thr	90921

atc Ile 16805	ccc gat gaa cac gcg Pro Asp Glu His Ala 16810	ttg aat aat gac aac Leu Asn Asn Asp Asn 16815	acg cca tct acc Thr Pro Ser Thr	90966
gga Gly 16820	gta ttg agg gct aat Val Leu Arg Ala Asn 16825	ttt ccc gtg gcc att Phe Pro Val Ala Ile 16830	gat gtt tca gca Asp Val Ser Ala	91011
gtc Val 16835	agc gca tgt aac gcc Ser Ala Cys Asn Ala 16840	cac acg caa ggt acg His Thr Gln Gly Thr 16845	tcg cta gcc tac Ser Leu Ala Tyr	91056
gcc Ala 16850	cgc ctg acc gca ctt Arg Leu Thr Ala Leu 16855	aaa tct aac ggt gac Lys Ser Asn Gly Asp 16860	acc cag caa caa Thr Gln Gln Gln	91101
aca Thr 16865	cct tta gac gtg gag Pro Leu Asp Val Glu 16870	gta att aca cca aag Val Ile Thr Pro Lys 16875	gcc tac ata cgt Ala Tyr Ile Arg	91146
cgg Arg 16880	aaa tat aag tct acg Lys Tyr Lys Ser Thr 16885	ttt tcc ccc cct ata Phe Ser Pro Pro Ile 16890	gag cgg gaa ggc Glu Arg Glu Gly	91191
caa Gln 16895	acc tcc gat ttg ttt Thr Ser Asp Leu Phe 16900	aac ctt gaa gaa cgc Asn Leu Glu Glu Arg 16905	cgc ttg gtt ctt Arg Leu Val Leu	91236
agt Ser 16910	ggc aat cgc gca att Gly Asn Arg Ala Ile 16915	gtg gta agg gta ctc Val Val Arg Val Leu 16920	tta ccg tgt tat Leu Pro Cys Tyr	91281
ttt Phe 16925	gac tgt tta aca acg Asp Cys Leu Thr Thr 16930	gat tcc acc gtt aca Asp Ser Thr Val Thr 16935	tct tcc ctt tca Ser Ser Leu Ser	91326
ata Ile 16940	tta gca aca tat aga Leu Ala Thr Tyr Arg 16945	ctg tgg tac gcg gcg Leu Trp Tyr Ala Ala 16950	gcg ttt gga aaa Ala Phe Gly Lys	91371
ccc Pro 16955	ggg gtt gtc cgt cca Gly Val Val Arg Pro 16960	atc ttt gcg tat tta Ile Phe Ala Tyr Leu 16965	ggc ccg gaa ctc Gly Pro Glu Leu	91416
aat Asn 16970	ccg aag ggt gaa gac Pro Lys Gly Glu Asp 16975	aga gac tac ttt tgt Arg Asp Tyr Phe Cys 16980	act gtc gga ttt Thr Val Gly Phe	91461
ccc Pro 16985	gga tgg acc act ctt Gly Trp Thr Thr Leu 16990	cgg aca caa act cca Arg Thr Gln Thr Pro 16995	gcc gtc gaa tct Ala Val Glu Ser	91506
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Pro 17015	Val	Thr	Gly	Ile	Gln 17020	Ala	Phe	His	Tyr	Leu 17025	Ala	Pro	Trp	Gly	
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atc Ile 17045	cct Pro	caa Gln	gat Asp	act Thr	gga Gly 17050	cat His	gca Ala	gat Asp	gca Ala	act Thr 17055	gtc Val	aat Asn	tgg Trp	gac Asp	91686
gcg Ala 17060	ggc Gly	cgg Arg	ata Ile	tct Ser	acc Thr 17065	gtc Val	ttc Phe	aaa Lys	cag Gln	cct Pro 17070	gta Val	caa Gln	cta Leu	caa Gln	91731
gat Asp 17075	cgt Arg	tgg Trp	atg Met	gca Ala	aag Lys 17080	ttt Phe	gat Asp	ttc Phe	agc Ser	gcc Ala 17085	ttt Phe	ttt Phe	ccc Pro	acg Thr	91776
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tac Tyr 17135	aaa Lys	gct Ala	att Ile	att Ile	ttt Phe 17140	ata Ile	gcc Ala	aat Asn	gaa Glu	att Ile 17145	agc Ser	ctt Leu	tgc Cys	gtc Val	91956
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aaa Lys 17165	gat Asp	gga Gly	ttt Phe	tgg Trp	gga Gly 17170	atc Ile	ttc Phe	acc Thr	gat Asp	tta Leu 17175	cat His	acg Thr	cgc Arg	aat Asn	92046
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ctt Leu 17210	aac Asn	ttt Phe	aca Thr	ccc Pro	gcc Ala 17215	atg Met	gaa Glu	ccg Pro	gta Val	ctc Leu 17220	cgg Arg	gtc Val	gag Glu	ggg Gly	92181
gtg Val	tac Tyr	act Thr	cac His	gca Ala	ttt Phe	acc Thr	tgg Trp	tgt Cys	acc Thr	acg Thr	gga Gly	agc Ser	tgg Trp	ctg Leu	92226

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Trp	Arg Ser Gln Ala Ala	Arg Asp Leu Lys Glu	Arg Leu Ser Gly		
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Leu	Leu Cys Thr Ala Thr	Lys Ile Arg Glu Arg	Ile Gln Glu Asn		
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Cys	Ile Trp Asp His Val	Leu Tyr Asp Ile Trp	Ala Gly Gln Val		
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Val	Glu Ala Ala Arg Lys	Thr Tyr Val Asp Phe	Phe Glu His Val		
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Phe	Asp Arg Arg Tyr Thr	Pro Val Tyr Trp Ser	Leu Gln Glu Gln		
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Asn	Ser Glu Thr Lys Ala	Ile Pro Ala Ser Tyr	Leu Thr Tyr Gly		
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His	Met Gln Asp Lys Asp	Tyr Lys Pro Arg Gln	Ile Ile Met Val		
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Arg	Asn Pro Asn Pro His	Gly Pro Pro Thr Val	Val Tyr Trp Glu		
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Leu	Leu Pro Ser Cys Ala	Cys Ile Pro Pro Ile	Asp Cys Ala Ala		
17375		17380		17385	
cat	ctc aag ccc ctt ata	cac acg ttt gtc act	att att aac cat	92721	
His	Leu Lys Pro Leu Ile	His Thr Phe Val Thr	Ile Ile Asn His		
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Thr	Asp Asp Pro Leu Ala	Ser Tyr Asn Phe Leu	Phe Leu		
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Tyr	Leu	Asn	Phe	Thr	Ser	Met	His	Ser	Ile	Gln	Pro	Ile	Leu	Ser	
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Arg	Ile	Arg	Glu	Leu			Ala	Ala	Ile	Thr	Ile		Pro	Lys	Glu	Arg	Val	
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Pro	Arg	Leu	Cys	Trp		Phe	Lys	Gln	Leu	Leu	Glu	Leu	Gln	Ala	Pro			
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Pro	Glu	Met	Gln	Arg	Asn	Glu	Leu	Pro	Phe	Ser	Val	Tyr	Leu	Ile				
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Ser	Gly	Asn	Ala	Gly	Ser	Gly	Lys	Ser	Thr	Cys	Ile	Gln	Thr	Leu				
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Ala	Gln	Asn	Val	His	Ala	Lys	Leu	Ser	Thr	Ala	Tyr	Ala	Ser	Arg				
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Val	Ile	Val	Ile	Asp	Glu	Ala	Gly	Leu	Leu	Gly	Arg	His	Ile	Leu				
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Thr Ala Val Val Tyr	Cys Trp Trp Leu Leu	Asn Ala Ile Tyr Gln	
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Ser Pro Gln Tyr Ile	Asn Gly Arg Lys Pro	Val Ile Val Cys Val	
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Gly Ser Pro Thr Gln	Thr Asp Ser Leu Glu	Ser His Phe Gln His	
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Asp Met Gln Arg Ser	His Val Thr Pro Ser	Glu Asn Ile Leu Thr	
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Tyr Ile Ile Cys Asn	Gln Thr Leu Arg Gln	Tyr Thr Asn Ile Ser	
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His Asn Trp Ala Ile	Phe Ile Asn Asn Lys	Arg Cys Gln Glu Asp	
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Asp Phe Gly Asn Leu	Leu Lys Thr Leu Glu	Tyr Gly Leu Pro Ile	
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Thr Glu Ala His Ala	Arg Leu Val Asp Thr	Phe Val Val Pro Ala	
17795	17800	17805	
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Ser Tyr Ile Asn Asn	Pro Ala Asn Leu Pro	Gly Trp Thr Arg Leu	
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Tyr Ser Ser His Lys	Glu Val Ser Ala Tyr	Met Ser Lys Leu His	
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Ala His Leu Lys Leu	Ser Lys Asn Asp His	Phe Ser Val Phe Ala	
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Leu Pro Thr Tyr Thr	Phe Ile Arg Leu Thr	Ala Phe Asp Glu Tyr	
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Arg Lys Leu Thr Gly	Gln Pro Gly Leu Ser	Val Glu His Trp Ile	
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Arg Ala Asn Ser Gly	Arg Leu His Asn Tyr	Ser Gln Ser Arg Asp	
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His Asp Met Gly Thr	Val Lys Tyr Glu Thr	His Ser Asn Arg Asp	
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Leu Ile Val Ala Arg	Thr Asp Ile Thr Tyr	Val Leu Asn Ser Leu	
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Val Val Val Thr Thr	Arg Leu Arg Lys Leu	Val Ile Gly Phe Ser	
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Gly Thr Phe Gln Ser	Phe Ala Lys Val Leu	Arg Asp Asp Ser Phe	
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Val Lys Ala Arg Gly	Glu Thr Ser Ile Glu	Tyr Ala Tyr Arg Phe	
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17990	17995	18000	
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Lys Arg Leu Ala Ala	Leu Thr Leu Glu Leu	Leu Ser Gly Thr Asn	
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Lys Ala Pro Leu His	Glu Ala Ala Val Asn	Gly Ala Gly Ala Gly	
18020	18025	18030	
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Ile Asp Cys Asp Gly	Ala Ala Thr Ser Ala	Asp Lys Ala Phe Cys	
18035	18040	18045	
ttt acc aaa gcc ccc	gag tcc aaa gta acg	gcc tcc ata ccc gaa	97879
Phe Thr Lys Ala Pro	Glu Ser Lys Val Thr	Ala Ser Ile Pro Glu	
18050	18055	18060	
gac ccg gat gat gta	att ttt acg gca ctt	aac gac gag gtt att	97924
Asp Pro Asp Asp Val	Ile Phe Thr Ala Leu	Asn Asp Glu Val Ile	
18065	18070	18075	
gac ttg gta tac tgc	cag tac gaa ttt tcc	tat ccc aaa tca tcc	97969
Asp Leu Val Tyr Cys	Gln Tyr Glu Phe Ser	Tyr Pro Lys Ser Ser	
18080	18085	18090	
aat gag gtc cat gct	cag ttt ctg tta atg	aaa gct att tac gat	98014
Asn Glu Val His Ala	Gln Phe Leu Leu Met	Lys Ala Ile Tyr Asp	
18095	18100	18105	
ggg cga tat gcc ata	tta gca gag ctt ttc	gaa agc agc ttt aca	98059
Gly Arg Tyr Ala Ile	Leu Ala Glu Leu Phe	Glu Ser Ser Phe Thr	

18110	18115	18120	
acc gcc ccc ttt agc	gcg tat gtc gat aat	gtt aat ttc aac gga	98104
Thr Ala Pro Phe Ser	Ala Tyr Val Asp Asn	Val Asn Phe Asn Gly	
18125	18130	18135	
agc gag ctt ttg atc	ggc aat gtg cgg ggg	ggg ctg tta tct ttg	98149
Ser Glu Leu Leu Ile	Gly Asn Val Arg Gly	Gly Leu Leu Ser Leu	
18140	18145	18150	
gca tta caa aca gat	acg tat acc ctt ttg	ggg tat act ttt gca	98194
Ala Leu Gln Thr Asp	Thr Tyr Thr Leu Leu	Gly Tyr Thr Phe Ala	
18155	18160	18165	
ccc gtg cca gtc ttt	gta gag gaa ctg acc	cga aaa aag ctg tac	98239
Pro Val Pro Val Phe	Val Glu Glu Leu Thr	Arg Lys Lys Leu Tyr	
18170	18175	18180	
cgc gaa act acc gaa	atg tta tat gct cta	cac gta cct ctt atg	98284
Arg Glu Thr Thr Glu	Met Leu Tyr Ala Leu	His Val Pro Leu Met	
18185	18190	18195	
gtc tta cag gat caa	cat ggg ttt gtg tcc	atc gta aac gct aac	98329
Val Leu Gln Asp Gln	His Gly Phe Val Ser	Ile Val Asn Ala Asn	
18200	18205	18210	
gta tgt gaa ttt acc	gag tct ata gag gat	gca gaa ttg gca atg	98374
Val Cys Glu Phe Thr	Glu Ser Ile Glu Asp	Ala Glu Leu Ala Met	
18215	18220	18225	
gcc acc acg gtg gac	tat ggc ctt agt tct	aaa cta gcc atg aca	98419
Ala Thr Thr Val Asp	Tyr Gly Leu Ser Ser	Lys Leu Ala Met Thr	
18230	18235	18240	
att gca cgc tca cag	ggc ctg agt tta gag	aag gta gct atc tgt	98464
Ile Ala Arg Ser Gln	Gly Leu Ser Leu Glu	Lys Val Ala Ile Cys	
18245	18250	18255	
ttt acg gcg gat aaa	ctg cgc cta aat agt	gtg tat gtt gcc atg	98509
Phe Thr Ala Asp Lys	Leu Arg Leu Asn Ser	Val Tyr Val Ala Met	
18260	18265	18270	
tcg cgt acg gtc tcc	tct agg ttc tta aaa	atg aat cta aac cct	98554
Ser Arg Thr Val Ser	Ser Arg Phe Leu Lys	Met Asn Leu Asn Pro	
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cta cgg gaa cga tat	gaa aaa tcc gca gaa	att agc gat cac att	98599
Leu Arg Glu Arg Tyr	Glu Lys Ser Ala Glu	Ile Ser Asp His Ile	
18290	18295	18300	
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Gly Ala	Phe Cys Thr Pro Gly	Trp Glu Ile His Pro	Ala Arg Leu	
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Val Glu	Asp Ile Asn Arg Val	Phe Leu Cys Ile Ala	Gln Ser Ser	
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Cys Trp	Glu Glu Leu Leu Gln	Leu Gln Pro Thr Gln	Thr Gln Cys	
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Leu Arg	Ala Thr Leu Met Glu	Val Ser His Arg Pro	Pro Arg Gly	
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Glu Asp	Gly Phe Ile Glu Ala	Pro Asn Val Pro Leu	His Arg Ser	
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Asp Asp	Asp Gly Ser Thr Pro	Ser Asp Val Ile Glu	Phe Arg Asp	
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Ser Asp	Ala Glu Ser Ser Asp	Gly Glu Asp Phe Ile	Val Glu Glu	
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Gly Asp	Cys Tyr Arg Asp Gly	Asp Gly Cys Asn Thr	Pro Ser Pro	
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Lys Arg	Pro Gln Arg Ala Ile	Glu Arg Tyr Ala Gly	Ala Glu Thr
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Gln	Ala Leu Met Asn Asp	Ala Glu Arg Tyr Phe	Ala Ala Ala Leu
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Cys	Ala Ile Ser Thr Glu	Ala Tyr Glu Ala Phe	Ile His Ser Pro
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Ser	Glu Arg Pro Cys Ala	Ser Leu Trp Gly Arg	Ala Lys Asp Ala
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Phe	Gly Arg Met Cys Gly	Glu Leu Ala Ala Asp	Arg Gln Arg Pro
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Pro	Ser Val Pro Pro Ile	Arg Arg Ala Val Leu	Ser Leu Leu Arg
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															Phe Leu		
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19425	19430	19435	
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Leu Ile Ile	Ile Pro Ile Val Ala	Ser Val Met Ile Leu	Thr Ala
19440	19445	19450	
atg gtt att	gtt att gta ata agc	gtt aag cga cgt aga	att aaa 115404
Met Val Ile	Val Ile Val Ile Ser	Val Lys Arg Arg Arg	Ile Lys
19455	19460	19465	
aaa cat cca	att tat cgc cca aat	aca aaa aca aga agg	ggc ata 115449
Lys His Pro	Ile Tyr Arg Pro Asn	Thr Lys Thr Arg Arg	Gly Ile
19470	19475	19480	
caa aat gcg	aca cca gaa tcc gat	gtg atg ttg gag gcc	gcc att 115494
Gln Asn Ala	Thr Pro Glu Ser Asp	Val Met Leu Glu Ala	Ala Ile
19485	19490	19495	
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Ala Gln Leu	Ala Thr Ile Arg Glu	Glu Ser Pro Pro His	Ser Val
19500	19505	19510	
gta aac ccg	ttt gtt aaa tag aactaattat	cccggttttt atattaaata	115590
Val Asn Pro	Phe Val Lys		
19515			
aactatatgc	gtttttattta	gcgtttttgat	tacgcgttgt gatatgaggg gaaggattaa 115650
gaatctccta	actataagtt	aacacgcccc	catttgggcg gggatgtttt atgaagcctt 115710
aaaggccgag	ctggtataca	cgagagcagt	ccatggtttt agacctcggg cgaattgcgt 115770
ggttttaagt	gactatatctc	cgagggtcgc	ctgtaat atg ggg aca gtt aat 115822
			Met Gly Thr Val Asn
			19520
aaa cct	gtg gtg ggg gta ttg	atg ggg ttc gga att	atc acg gga 115867
Lys Pro	Val Val Gly Val Leu	Met Gly Phe Gly Ile	Ile Thr Gly
19525	19530	19535	
acg ttg	cgt ata acg aat ccg	gtc aga gca tcc gtc	ttg cga tac 115912
Thr Leu	Arg Ile Thr Asn Pro	Val Arg Ala Ser Val	Leu Arg Tyr
19540	19545	19550	
gat gat	ttt cac acc gat gaa	gac aaa ctg gat aca	aac tcc gta 115957
Asp Asp	Phe His Thr Asp Glu	Asp Lys Leu Asp Thr	Asn Ser Val
19555	19560	19565	
tat gag	cct tac tac cat tca	gat cat gcg gag tct	tca tgg gta 116002
Tyr Glu	Pro Tyr Tyr His Ser	Asp His Ala Glu Ser	Ser Trp Val
19570	19575	19580	
aat ccg	gga gag tct tcg cga	aaa gcg tac gat cat	aac tca cct 116047

Asn	Arg	Gly	Glu	Ser	Ser	Arg	Lys	Ala	Tyr	Asp	His	Asn	Ser	Pro	
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Tyr	Ile	Trp	Pro	Arg	Asn	Asp	Tyr	Asp	Gly	Phe	Leu	Glu	Asn	Ala	
	19600					19605					19610				
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His	Glu	His	His	Gly	Val	Tyr	Asn	Gln	Gly	Arg	Gly	Ile	Asp	Ser	
	19615					19620					19625				
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Gly	Glu	Arg	Leu	Met	Gln	Pro	Thr	Gln	Met	Ser	Ala	Gln	Glu	Asp	
	19630					19635					19640				
ctt	ggg	gac	gat	acg	ggc	atc	cac	gtt	atc	cct	acg	tta	aac	ggc	116227
Leu	Gly	Asp	Asp	Thr	Gly	Ile	His	Val	Ile	Pro	Thr	Leu	Asn	Gly	
	19645					19650					19655				
gat	gac	aga	cat	aaa	att	gta	aat	gtg	gac	caa	cgt	caa	tac	ggt	116272
Asp	Asp	Arg	His	Lys	Ile	Val	Asn	Val	Asp	Gln	Arg	Gln	Tyr	Gly	
	19660					19665					19670				
gac	gtg	ttt	aaa	gga	gat	ctt	aat	cca	aaa	ccc	caa	ggc	caa	aga	116317
Asp	Val	Phe	Lys	Gly	Asp	Leu	Asn	Pro	Lys	Pro	Gln	Gly	Gln	Arg	
	19675					19680					19685				
ctc	att	gag	gtg	tca	gtg	gaa	gaa	aat	cac	ccg	ttt	act	tta	cgc	116362
Leu	Ile	Glu	Val	Ser	Val	Glu	Glu	Asn	His	Pro	Phe	Thr	Leu	Arg	
	19690					19695					19700				
gca	ccg	att	cag	cgg	att	tat	gga	gtc	cgg	tac	acc	gag	act	tgg	116407
Ala	Pro	Ile	Gln	Arg	Ile	Tyr	Gly	Val	Arg	Tyr	Thr	Glu	Thr	Trp	
	19705					19710					19715				
agc	ttt	ttg	ccg	tca	tta	acc	tgt	acg	gga	gac	gca	gcg	ccc	gcc	116452
Ser	Phe	Leu	Pro	Ser	Leu	Thr	Cys	Thr	Gly	Asp	Ala	Ala	Pro	Ala	
	19720					19725					19730				
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Ile	Gln	His	Ile	Cys	Leu	Lys	His	Thr	Thr	Cys	Phe	Gln	Asp	Val	
	19735					19740					19745				
gtg	gtg	gat	gtg	gat	tgc	gcg	gaa	aat	act	aaa	gag	gat	cag	ttg	116542
Val	Val	Asp	Val	Asp	Cys	Ala	Glu	Asn	Thr	Lys	Glu	Asp	Gln	Leu	
	19750					19755					19760				
gcc	gaa	atc	agt	tac	cgt	ttt	caa	ggt	aag	aag	gaa	gcg	gac	caa	116587
Ala	Glu	Ile	Ser	Tyr	Arg	Phe	Gln	Gly	Lys	Lys	Glu	Ala	Asp	Gln	
	19765					19770					19775				
ccg	tgg	att	gtt	gta	aac	acg	agc	aca	ctg	ttt	gat	gaa	ctc	gaa	116632
Pro	Trp	Ile	Val	Val	Asn	Thr	Ser	Thr	Leu	Phe	Asp	Glu	Leu	Glu	
	19780					19785					19790				
tta	gac	ccc	ccc	gag	att	gaa	ccg	ggt	gtc	ttg	aaa	gta	ctt	cgg	116677
Leu	Asp	Pro	Pro	Glu	Ile	Glu	Pro	Gly	Val	Leu	Lys	Val	Leu	Arg	

19795		19800		19805	
aca gaa	aaa caa tac ttg ggt	gtg tac att tgg aac	atg cgc ggc	116722	
Thr Glu	Lys Gln Tyr Leu Gly	Val Tyr Ile Trp Asn	Met Arg Gly		
19810		19815		19820	
tcc gat	ggg acg tct acc tac	gcc acg ttt ttg gtc	acc tgg aaa	116767	
Ser Asp	Gly Thr Ser Thr Tyr	Ala Thr Phe Leu Val	Thr Trp Lys		
19825		19830		19835	
ggg gat	gaa aaa aca aga aac	cct acg ccc gca gta	act cct caa	116812	
Gly Asp	Glu Lys Thr Arg Asn	Pro Thr Pro Ala Val	Thr Pro Gln		
19840		19845		19850	
cca aga	ggg gct gag ttt cat	atg tgg aat tac cac	tcg cat gta	116857	
Pro Arg	Gly Ala Glu Phe His	Met Trp Asn Tyr His	Ser His Val		
19855		19860		19865	
ttt tca	gtt ggt gat acg ttt	agc ttg gca atg cat	ctt cag tat	116902	
Phe Ser	Val Gly Asp Thr Phe	Ser Leu Ala Met His	Leu Gln Tyr		
19870		19875		19880	
aag ata	cat gaa gcg cca ttt	gat ttg ctg tta gag	tgg ttg tat	116947	
Lys Ile	His Glu Ala Pro Phe	Asp Leu Leu Leu Glu	Trp Leu Tyr		
19885		19890		19895	
gtc ccc	atc gat cct aca tgt	caa cca atg cgg tta	tat tct acg	116992	
Val Pro	Ile Asp Pro Thr Cys	Gln Pro Met Arg Leu	Tyr Ser Thr		
19900		19905		19910	
tgt ttg	tat cat ccc aac gca	ccc caa tgc ctc tct	cat atg aat	117037	
Cys Leu	Tyr His Pro Asn Ala	Pro Gln Cys Leu Ser	His Met Asn		
19915		19920		19925	
tcc ggt	tgt aca ttt acc tcg	cca cat tta gcc cag	cgt gtt gca	117082	
Ser Gly	Cys Thr Phe Thr Ser	Pro His Leu Ala Gln	Arg Val Ala		
19930		19935		19940	
agc aca	gtg tat caa aat tgt	gaa cat gca gat aac	tac acc gca	117127	
Ser Thr	Val Tyr Gln Asn Cys	Glu His Ala Asp Asn	Tyr Thr Ala		
19945		19950		19955	
tat tgt	ctg gga ata tct cat	atg gag cct agc ttt	ggg cta atc	117172	
Tyr Cys	Leu Gly Ile Ser His	Met Glu Pro Ser Phe	Gly Leu Ile		
19960		19965		19970	
tta cac	gac ggg ggc acc acg	tta aag ttt gta gat	aca ccc gag	117217	
Leu His	Asp Gly Gly Thr Thr	Leu Lys Phe Val Asp	Thr Pro Glu		
19975		19980		19985	
agt ttg	tcg gga tta tac gtt	ttt gtg gtg tat ttt	aac ggg cat	117262	
Ser Leu	Ser Gly Leu Tyr Val	Phe Val Val Tyr Phe	Asn Gly His		
19990		19995		20000	
gtt gaa	gcc gta gca tac act	gtt gta tcc aca gta	gat cat ttt	117307	
Val Glu	Ala Val Ala Tyr Thr	Val Val Ser Thr Val	Asp His Phe		
20005		20010		20015	

gta aac	gca att gaa gag cgt	gga ttt ccg cca acg	gcc ggt cag	117352		
Val Asn	Ala Ile Glu Glu Arg	Gly Phe Pro Pro Thr	Ala Gly Gln			
20020	20025	20030				
cca ccg	gcg act act aaa ccc	aag gaa att acc ccc	gta aac ccc	117397		
Pro Pro	Ala Thr Thr Lys Pro	Lys Glu Ile Thr Pro	Val Asn Pro			
20035	20040	20045				
gga acg	tca cca ctt cta cga	tat gcc gca tgg acc	gga ggg ctt	117442		
Gly Thr	Ser Pro Leu Leu Arg	Tyr Ala Ala Trp Thr	Gly Gly Leu			
20050	20055	20060				
gca gca	gta gta ctt tta tgt	ctc gta ata ttt tta	atc tgt acg	117487		
Ala Ala	Val Val Leu Leu Cys	Leu Val Ile Phe Leu	Ile Cys Thr			
20065	20070	20075				
gct aaa	cga atg agg gtt aaa	gcc tat agg gta gac	aag tcc ccg	117532		
Ala Lys	Arg Met Arg Val Lys	Ala Tyr Arg Val Asp	Lys Ser Pro			
20080	20085	20090				
tat aac	caa agc atg tat tac	gct ggc ctt cca gtg	gac gat ttc	117577		
Tyr Asn	Gln Ser Met Tyr Tyr	Ala Gly Leu Pro Val	Asp Asp Phe			
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gag gac	tcg gaa tct acg gat	acg gaa gaa gag ttt	ggt aac gcg	117622		
Glu Asp	Ser Glu Ser Thr Asp	Thr Glu Glu Glu Phe	Gly Asn Ala			
20110	20115	20120				
att gga	ggg agt cac ggg ggt	tcg agt tac acg gtg	tat ata gat	117667		
Ile Gly	Gly Ser His Gly Gly	Ser Ser Tyr Thr Val	Tyr Ile Asp			
20125	20130	20135				
aag acc	cgg tga tcaccgaacc	ggggcaacgc	cgagcgtgta	aatttaaata	117719	
Lys Thr	Arg					
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Met Asp Thr

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Thr Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala Ala
20160 20165 20170

gaa cac agg gcc cgg gtg gtc acc tcg agt cag cct gac gat cta 120907
Glu His Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu
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Leu Phe Gly Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile
20190 20195 20200

gtt tca att ccc tcc gta tcg gga ctt caa cca gaa ccc aga acg 120997
Val Ser Ile Pro Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr
20205 20210 20215

gaa gat gtt ggc gaa gag cta aca caa gac gac tac gta tgc gag 121042
Glu Asp Val Gly Glu Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu
20220 20225 20230

gac ggt cag gat cta atg ggc tcg cct gta atc ccg ctg gcc gag 121087
Asp Gly Gln Asp Leu Met Gly Ser Pro Val Ile Pro Leu Ala Glu
20235 20240 20245

gtc ttc cac acc cga ttc tcg gag gcc ggc gcg cga gaa cca aca 121132
Val Phe His Thr Arg Phe Ser Glu Ala Gly Ala Arg Glu Pro Thr

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gga	gcc gat cgc tcc ctt	gag aca gtc tct ctc	gga acg aag ctt	121177	
Gly	Ala Asp Arg Ser Leu	Glu Thr Val Ser Leu	Gly Thr Lys Leu		
20265		20270		20275	
gct	agg tct cca aaa cca	ccg atg aac gat ggg	gaa acg ggc aga	121222	
Ala	Arg Ser Pro Lys Pro	Pro Met Asn Asp Gly	Glu Thr Gly Arg		
20280		20285		20290	
ggt	acg acc cct ccg ttc	ccg cag gcc ttc tcc	cct gta tcc ccc	121267	
Gly	Thr Thr Pro Pro Phe	Pro Gln Ala Phe Ser	Pro Val Ser Pro		
20295		20300		20305	
gcg	tct cct gtt gga gac	gcc gcc ggg aac gat	caa cgg gaa gac	121312	
Ala	Ser Pro Val Gly Asp	Ala Ala Gly Asn Asp	Gln Arg Glu Asp		
20310		20315		20320	
cag	cgg tct ata ccc cga	caa acg acg aga gga	aat tca cca ggt	121357	
Gln	Arg Ser Ile Pro Arg	Gln Thr Thr Arg Gly	Asn Ser Pro Gly		
20325		20330		20335	
ttg	ccg tcg gtg gtc cat	cga gac aga caa act	cag tcc atc tcg	121402	
Leu	Pro Ser Val Val His	Arg Asp Arg Gln Thr	Gln Ser Ile Ser		
20340		20345		20350	
ggt	aaa aag ccg ggc gat	gag caa gcg ggt cat	gcg cat gca tcg	121447	
Gly	Lys Lys Pro Gly Asp	Glu Gln Ala Gly His	Ala His Ala Ser		
20355		20360		20365	
ggg	gac gga gta gtt ctc	cag aaa act caa ccg	ccc gct cag gga	121492	
Gly	Asp Gly Val Val Leu	Gln Lys Thr Gln Arg	Pro Ala Gln Gly		
20370		20375		20380	
aag	agc ccg aag aaa aag	act ttg aag gtt aag	gtc cca ctc ccg	121537	
Lys	Ser Pro Lys Lys Lys	Thr Leu Lys Val Lys	Val Pro Leu Pro		
20385		20390		20395	
gcg	cgg aaa ccc ggt gga	cct gta ccc ggc ccg	gtt gag caa ttg	121582	
Ala	Arg Lys Pro Gly Gly	Pro Val Pro Gly Pro	Val Glu Gln Leu		
20400		20405		20410	
tac	cac gtc ctt tcg gac	agc gtt ccc gct aag	ggg gca aag gcg	121627	
Tyr	His Val Leu Ser Asp	Ser Val Pro Ala Lys	Gly Ala Lys Ala		
20415		20420		20425	
gac	ctg ccg ttt gag acc	gat gat acc cgc cca	agg aaa cat gat	121672	
Asp	Leu Pro Phe Glu Thr	Asp Asp Thr Arg Pro	Arg Lys His Asp		
20430		20435		20440	
gcc	cgg ggt ata aca cct	cgc gtc cct gga cgt	tcg tcg ggg ggc	121717	
Ala	Arg Gly Ile Thr Pro	Arg Val Pro Gly Arg	Ser Ser Gly Gly		
20445		20450		20455	
aaa	cct aga gcg ttt ttg	gcc ctg ccg gga aga	tcc cac gca cca	121762	
Lys	Pro Arg Ala Phe Leu	Ala Leu Pro Gly Arg	Ser His Ala Pro		
20460		20465		20470	

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Asp	Pro	Ile	Glu	Asp	Asp	Ser	Pro	Val	Glu	Lys	Lys	Pro	Lys	Ser	
20475					20480					20485					
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Arg	Glu	Phe	Val	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Trp	Gly	Ser	
20490					20495					20500					
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Ser	Ser	Glu	Asp	Glu	Asp	Asp	Glu	Pro	Arg	Arg	Val	Ser	Val	Gly	
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Ser	Glu	Thr	Thr	Gly	Ser	Arg	Ser	Gly	Arg	Glu	His	Ala	Pro	Ser	
20520					20525					20530					
ccg	tca	aat	tcg	gat	gat	tcg	gac	tca	aat	gat	ggt	ggg	tcg	acg	121987
Pro	Ser	Asn	Ser	Asp	Asp	Ser	Asp	Ser	Asn	Asp	Gly	Gly	Ser	Thr	
20535					20540					20545					
aaa	caa	aat	atc	caa	ccg	gga	tat	cga	tcc	atc	agc	ggt	ccc	gat	122032
Lys	Gln	Asn	Ile	Gln	Pro	Gly	Tyr	Arg	Ser	Ile	Ser	Gly	Pro	Asp	
20550					20555					20560					
ccg	agg	att	cgt	aag	acc	aaa	cgt	ctt	gcg	ggg	gaa	ccg	ggg	cgc	122077
Pro	Arg	Ile	Arg	Lys	Thr	Lys	Arg	Leu	Ala	Gly	Glu	Pro	Gly	Arg	
20565					20570					20575					
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Gln	Arg	Gln	Lys	Ser	Phe	Ser	Leu	Pro	Arg	Ser	Arg	Thr	Pro	Ile	
20580					20585					20590					
att	ccc	ccg	gtg	tcg	ggg	ccg	ctc	atg	atg	ccc	gac	gga	agc	cct	122167
Ile	Pro	Pro	Val	Ser	Gly	Pro	Leu	Met	Met	Pro	Asp	Gly	Ser	Pro	
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tg	ccc	gga	tcg	gca	ccc	ctc	cca	tcc	aac	agg	gtg	cgg	ttt	gga	122212
Trp	Pro	Gly	Ser	Ala	Pro	Leu	Pro	Ser	Asn	Arg	Val	Arg	Phe	Gly	
20610					20615					20620					
ccg	tcc	ggg	gag	acc	aga	gag	ggt	cac	tg	gag	gat	gag	gct	gtg	122257
Pro	Ser	Gly	Glu	Thr	Arg	Glu	Gly	His	Trp	Glu	Asp	Glu	Ala	Val	
20625					20630					20635					
aga	gcg	gcg	cgg	gct	cgt	tac	gag	gcc	tca	acg	gaa	ccc	gtg	ccg	122302
Arg	Ala	Ala	Arg	Ala	Arg	Tyr	Glu	Ala	Ser	Thr	Glu	Pro	Val	Pro	
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Leu	Tyr	Val	Pro	Glu	Leu	Gly	Asp	Pro	Ala	Arg	Gln	Tyr	Arg	Ala	
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ctg	att	aac	ctg	atc	tac	tgt	cca	gac	aga	gac	cct	ata	gca	tg	122392
Leu	Ile	Asn	Leu	Ile	Tyr	Cys	Pro	Asp	Arg	Asp	Pro	Ile	Ala	Trp	
20670					20675					20680					

ctc	cag	aac	ccc	aag	ctg	acc	ggg	gtc	aac	tcg	gcc	ctg	aac	cag	122437
Leu	Gln	Asn	Pro	Lys	Leu	Thr	Gly	Val	Asn	Ser	Ala	Leu	Asn	Gln	
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ttc	tac	caa	aag	ctg	ttg	cca	ccg	gga	cgg	gcg	ggg	acc	gcc	gtt	122482
Phe	Tyr	Gln	Lys	Leu	Leu	Pro	Pro	Gly	Arg	Ala	Gly	Thr	Ala	Val	
20700					20705					20710					
acg	ggg	agc	gta	gcg	tct	ccc	gtt	ccg	cat	gta	ggc	gaa	gcc	atg	122527
Thr	Gly	Ser	Val	Ala	Ser	Pro	Val	Pro	His	Val	Gly	Glu	Ala	Met	
20715					20720					20725					
gcc	acg	ggg	gag	gcc	ctc	tgg	gct	ctc	ccc	cac	gcg	gcc	gcg	gcc	122572
Ala	Thr	Gly	Glu	Ala	Leu	Trp	Ala	Leu	Pro	His	Ala	Ala	Ala	Ala	
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gtg	gct	atg	agc	cgt	cga	tac	gac	cgg	gcc	caa	aaa	cac	ttt	atc	122617
Val	Ala	Met	Ser	Arg	Arg	Tyr	Asp	Arg	Ala	Gln	Lys	His	Phe	Ile	
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cta	cag	agt	ctc	cgc	aga	gcc	ttt	gcc	agc	atg	gca	tac	ccc	gag	122662
Leu	Gln	Ser	Leu	Arg	Arg	Ala	Phe	Ala	Ser	Met	Ala	Tyr	Pro	Glu	
20760					20765					20770					
gca	acg	ggc	tcc	agt	ccg	gcg	gcg	cgg	atc	tcc	cgc	ggg	cac	cct	122707
Ala	Thr	Gly	Ser	Ser	Pro	Ala	Ala	Arg	Ile	Ser	Arg	Gly	His	Pro	
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tct	cca	aca	acc	ccg	gcc	aca	cag	gct	ccc	gac	cct	cag	ccg	tcg	122752
Ser	Pro	Thr	Thr	Pro	Ala	Thr	Gln	Ala	Pro	Asp	Pro	Gln	Pro	Ser	
20790					20795					20800					
gcc	gcc	gca	cgc	tct	ctt	tct	gtg	tgt	cca	ccg	gat	gat	cgt	tta	122797
Ala	Ala	Ala	Arg	Ser	Leu	Ser	Val	Cys	Pro	Pro	Asp	Asp	Arg	Leu	
20805					20810					20815					
cga	act	ccg	cgc	aag	cgc	aag	tcc	cag	cca	gtc	gag	agc	aga	agc	122842
Arg	Thr	Pro	Arg	Lys	Arg	Lys	Ser	Gln	Pro	Val	Glu	Ser	Arg	Ser	
20820					20825					20830					
ctc	ctc	gac	aag	att	agg	gag	aca	ccc	gtc	gcg	gac	gcc	cgg	gtt	122887
Leu	Leu	Asp	Lys	Ile	Arg	Glu	Thr	Pro	Val	Ala	Asp	Ala	Arg	Val	
20835					20840					20845					
gca	gac	gat	cat	gtg	gtt	tcc	aag	gcc	aag	agg	cgg	gta	tcc	gag	122932
Ala	Asp	Asp	His	Val	Val	Ser	Lys	Ala	Lys	Arg	Arg	Val	Ser	Glu	
20850					20855					20860					
ccc	gtg	acc	atc	acc	tcg	ggc	cct	gtg	gtg	gat	ccc	ccc	gcc	gta	122977
Pro	Val	Thr	Ile	Thr	Ser	Gly	Pro	Val	Val	Asp	Pro	Pro	Ala	Val	
20865					20870					20875					
ata	acg	atg	cca	ctt	gac	gga	ccg	gcc	cca	aac	ggg	gga	ttt	cgg	123022
Ile	Thr	Met	Pro	Leu	Asp	Gly	Pro	Ala	Pro	Asn	Gly	Gly	Phe	Arg	
20880					20885					20890					
cgt	att	ccc	cgg	ggg	gcc	ctg	cat	acc	ccg	gtc	ccg	tcg	gac	cag	123067

Arg 20895	Ile	Pro	Arg	Gly	Ala 20900	Leu	His	Thr	Pro	Val 20905	Pro	Ser	Asp	Gln	
gct Ala 20910	cgc Arg	aag Lys	gcg Ala	tac Tyr	tgt Cys 20915	acc Thr	ccc Pro	gaa Glu	acc Thr	atc Ile 20920	gcc Ala	cgt Arg	ctg Leu	gtc Val	123112
gac Asp 20925	gac Asp	cca Pro	ttg Leu	ttt Phe	ccc Pro 20930	acg Thr	gcc Ala	tggtg Trp	cgc Arg	cct Pro 20935	gcg Ala	cta Leu	agc Ser	ttt Phe	123157
gat Asp 20940	ccc Pro	ggc Gly	gcc Ala	ttg Leu	gcg Ala 20945	gaa Glu	atc Ile	gcc Ala	gct Ala	cgg Arg 20950	cgt Arg	ccg Pro	ggc Gly	gga Gly	123202
gga Gly 20955	gac Asp	cga Arg	cggttt Arg	gtt Phe	ggc Gly 20960	cca Pro	ccc Pro	agc Ser	gga Gly	gtg Val 20965	gag Glu	gcg Ala	ctg Leu	cga Arg	123247
cggtg Arg 20970	agg Arg	tgc Cys	gcc Ala	tggtat Trp	atg Met 20975	cggtg Arg	cag Gln	atc Ile	cca Pro	gac Asp 20980	ccgtg Pro	gag Glu	gat Asp	gtg Val	123292
agg Arg 20985	ctt Leu	ctg Leu	atc Ile	atc Ile	tac Tyr 20990	gat Asp	ccgttg Pro	ccc Leu	gga Pro	gag Gly 20995	gag Glu	gac Asp	atc Ile	aac Asn	123337
ggc Gly 21000	ccc Pro	ctc Leu	gag Glu	agc Ser	acc Thr 21005	ctc Leu	gcg Ala	aca Thr	gat Asp	ccg Pro 21010	gga Gly	ccgtca Pro	tggtg Ser		123382
agt Ser 21015	cca Pro	tcc Ser	cga Arg	ggggly Gly	gga Gly 21020	ctgtct Leu	gtgtg Ser	gtc Val	ctg Val	ctg Leu 21025	gca Ala	gcc Ala	ctg Leu	agt Ser	123427
aac Asn 21030	cggttg Arg	tgtgc Leu	ctg Cys	ccg Leu	agg Pro 21035	agc Ser	act Thr	cat His	gcc Ala	tggtg Trp 21040	gcc Ala	gggaac Gly	tggtg Asn		123472
acc Thr 21045	ggc Gly	ccg Pro	ccg Pro	gac Asp	gtgtg Val 21050	tcc Ser	gct Ala	ttg Leu	aac Asn	gcc Ala 21055	ccgtg Arg	ggc Gly	gtt Val	tta Leu	123517
tta Leu 21060	ctgtcg Leu	acc Ser	cga Thr	gac Arg	ctgtg Asp 21065	ctg Leu	gcc Ala	ttt Phe	gcc Ala	ggggly Gly 21070	gcc Ala	gtc Val	gag Glu	tat Tyr	123562
cta Leu 21075	ggc Gly	tcg Ser	cggttg Arg	gcc Leu	ctgtg Ala 21080	tct Ser	gcc Ala	cggtg Arg	cgc Arg	cggtg Arg 21085	ttg Leu	ctg Leu	gtg Val	ttg Leu	123607
gac Asp 21090	gcgtg Ala	gcc Val	ctc Ala	gag Leu	gtgtg Glu 21095	agg Arg	tggtg Trp	ccc Pro	agg Arg	gat Asp 21100	gga Gly	ccc Pro	gct Ala	ttg Leu	123652
tct Ser	cag Gln	tattat Tyr	cac His	gtgtg Val	tac Tyr	gtc Val	cggtg Arg	gcc Ala	ccgtg Pro	gcgtg Ala	cga Arg	ccgtg Pro	gac Asp	gcc Ala	123697

21105		21110		21115	
cag	gcc gtc gtc cga tgg	cca gac tcg gcg gtc	aca gaa gga ctc	123742	
Gln	Ala Val Val Arg Trp	Pro Asp Ser Ala Val	Thr Glu Gly Leu		
21120		21125		21130	
gcc	cgg gcc gtg ttt gca	tcg tcg cgc acc ttt	ggg cca gcg agt	123787	
Ala	Arg Ala Val Phe Ala	Ser Ser Arg Thr Phe	Gly Pro Ala Ser		
21135		21140		21145	
ttt	gct cgt atc gag act	gcg ttt gcc aac ctg	tac ccg ggc gaa	123832	
Phe	Ala Arg Ile Glu Thr	Ala Phe Ala Asn Leu	Tyr Pro Gly Glu		
21150		21155		21160	
caa	ccc ctg tgt ttg tgc	gcg ggt ggg aac gtc	gca tac acc gtg	123877	
Gln	Pro Leu Cys Leu Cys	Arg Gly Gly Asn Val	Ala Tyr Thr Val		
21165		21170		21175	
tgt	acc cgc gcg ggc ccc	aag acc cgc gtc ccc	ctg tcg ccc cgt	123922	
Cys	Thr Arg Ala Gly Pro	Lys Thr Arg Val Pro	Leu Ser Pro Arg		
21180		21185		21190	
gaa	tac cgg cag tac gtg	ctg ccg ggt ttt gac	ggg tgc aag gac	123967	
Glu	Tyr Arg Gln Tyr Val	Leu Pro Gly Phe Asp	Gly Cys Lys Asp		
21195		21200		21205	
ctc	gcg cga cag tct cgg	ggg ctg ggg ctc ggg	gca gcc gac ttt	124012	
Leu	Ala Arg Gln Ser Arg	Gly Leu Gly Leu Gly	Ala Ala Asp Phe		
21210		21215		21220	
gtg	gac gag gcg gca cat	agc cac cgc gca gca	aac cga tgg ggc	124057	
Val	Asp Glu Ala Ala His	Ser His Arg Ala Ala	Asn Arg Trp Gly		
21225		21230		21235	
ctg	ggg gcc gcg ctt cga	ccc gtc ttc ctt ccc	gag gga cgg aga	124102	
Leu	Gly Ala Ala Leu Arg	Pro Val Phe Leu Pro	Glu Gly Arg Arg		
21240		21245		21250	
ccg	ggg gcc gcc ggg ccg	gag gcc ggc gac gta	ccc acc tgg gcg	124147	
Pro	Gly Ala Ala Gly Pro	Glu Ala Gly Asp Val	Pro Thr Trp Ala		
21255		21260		21265	
agg	gtg ttt tgc cgc cac	gcc ctg ctg gaa ccc	gac cct gcc gca	124192	
Arg	Val Phe Cys Arg His	Ala Leu Leu Glu Pro	Asp Pro Ala Ala		
21270		21275		21280	
gaa	cca ctc gtg ctt cca	ccc gtg gcc ggt cgg	tcg gtg gcg ctg	124237	
Glu	Pro Leu Val Leu Pro	Pro Val Ala Gly Arg	Ser Val Ala Leu		
21285		21290		21295	
tat	gcg tcg gcg gac gag	gct cgg aat gcc ctc	ccc ccg att ccc	124282	
Tyr	Ala Ser Ala Asp Glu	Ala Arg Asn Ala Leu	Pro Pro Ile Pro		
21300		21305		21310	
aga	gta atg tgg ccg ccc	ggg ttt ggg gcc gcg	gag acg gtg ttg	124327	
Arg	Val Met Trp Pro Pro	Gly Phe Gly Ala Ala	Glu Thr Val Leu		
21315		21320		21325	

gag ggg agc gac gga aca cgg ttc gtg ttc gga cac cac ggg ggc 124372
 Glu Gly Ser Asp Gly Thr Arg Phe Val Phe Gly His His Gly Gly
 21330 21335 21340

tcg gaa cgg ccg tca gaa acc cag gcg ggg cga cag cgg cgc acc 124417
 Ser Glu Arg Pro Ser Glu Thr Gln Ala Gly Arg Gln Arg Arg Thr
 21345 21350 21355

gca gac gac aga gaa cac gct ttg gag ctg gac gat tgg gag gtg 124462
 Ala Asp Asp Arg Glu His Ala Leu Glu Leu Asp Asp Trp Glu Val
 21360 21365 21370

ggg tgt gaa gac gcg tgg gac agc gag gag ggg ggc ggg gac gac 124507
 Gly Cys Glu Asp Ala Trp Asp Ser Glu Glu Gly Gly Gly Asp Asp
 21375 21380 21385

ggg gac gca ccg ggg tca tcc ttt ggg gtg agc atc gtg tcg gtg 124552
 Gly Asp Ala Pro Gly Ser Ser Phe Gly Val Ser Ile Val Ser Val
 21390 21395 21400

gcc ccg ggt gtg ctg cga gac cgc cgg gtg ggt ttg cgc ccg gcg 124597
 Ala Pro Gly Val Leu Arg Asp Arg Arg Val Gly Leu Arg Pro Ala
 21405 21410 21415

gtc aag gtg gag ctg ttg tcc tcg tcc tcg tcc tcc gag gac gag 124642
 Val Lys Val Glu Leu Leu Ser Ser Ser Ser Ser Ser Glu Asp Glu
 21420 21425 21430

gac gat gtg tgg gga ggg cgc ggg ggg agg agc ccc ccg cag agt 124687
 Asp Asp Val Trp Gly Gly Arg Gly Gly Arg Ser Pro Pro Gln Ser
 21435 21440 21445

cgg ggg tga cggagtcgcc tcctttttctc gtgagcgcca ctggcgcgcg 124736
 Arg Gly
 21450

gactgtttgt tgtaataaaa agcgggaacgg tttttatgaa aaaagtgtct gtctgtctgt 124796

gcggggcgggc gacggggcggg ctgggtcggac cccccccga aaataacccc cccccggttt 124856

ctgggcgccc ggcggacccc gggagagg 124884

<210> 9
 <211> 238
 <212> PRT
 <213> Varicella zoster

<400> 9

Met His Val Ile Ser Glu Thr Leu Ala Tyr Gly His Val Pro Ala Phe
 1 5 10 15

Ile Met Gly Ser Thr Leu Val Arg Pro Ser Leu Asn Ala Thr Ala Glu
 20 25 30

Glu Asn Pro Ala Ser Glu Thr Arg Cys Leu Leu Arg Val Leu Ala Gly
 35 40 45

Arg Thr Val Asp Leu Pro Gly Gly Gly Thr Leu His Ile Thr Cys Thr
 50 55 60

Lys Thr Tyr Val Ile Ile Gly Lys Tyr Ser Lys Pro Gly Glu Arg Leu
 65 70 75 80

Ser Leu Ala Arg Leu Ile Gly Arg Ala Met Thr Pro Gly Gly Ala Arg
 85 90 95

Thr Phe Ile Ile Leu Ala Met Lys Glu Lys Arg Ser Thr Thr Leu Gly
 100 105 110

Tyr Glu Cys Gly Thr Gly Leu His Leu Leu Ala Pro Ser Met Gly Thr
 115 120 125

Phe Leu Arg Thr His Gly Leu Ser Asn Arg Asp Leu Cys Leu Trp Arg
 130 135 140

Gly Asn Ile Tyr Asp Met His Met Gln Arg Leu Met Phe Trp Glu Asn
 145 150 155 160

Ile Ala Gln Asn Thr Thr Glu Thr Pro Cys Ile Thr Ser Thr Leu Thr
 165 170 175

Cys Asn Leu Thr Glu Asp Ser Gly Glu Ala Ala Leu Thr Thr Ser Asp
 180 185 190

Arg Pro Thr Leu Pro Thr Leu Thr Ala Gln Gly Arg Pro Thr Val Ser
 195 200 205

Asn Ile Arg Gly Ile Leu Lys Gly Ser Pro Arg Gln Gln Pro Val Cys
 210 215 220

His Arg Val Arg Phe Ala Glu Pro Thr Glu Gly Val Leu Met
 225 230 235

<210> 10
 <211> 259
 <212> PRT

<213> Varicella zoster

<400> 10

Met Gln Thr Val Cys Ala Ser Leu Cys Gly Tyr Ala Arg Ile Pro Thr
1 5 10 15

Glu Glu Pro Ser Tyr Glu Glu Val Arg Val Asn Thr His Pro Gln Gly
20 25 30

Ala Ala Leu Leu Arg Leu Gln Glu Ala Leu Thr Ala Val Asn Gly Leu
35 40 45

Leu Pro Ala Pro Leu Thr Leu Glu Asp Val Val Ala Ser Ala Asp Asn
50 55 60

Thr Arg Arg Leu Val Arg Ala Gln Ala Leu Ala Arg Thr Tyr Ala Ala
65 70 75 80

Cys Ser Arg Asn Ile Glu Cys Leu Lys Gln His His Phe Thr Glu Asp
85 90 95

Asn Pro Gly Leu Asn Ala Val Val Arg Ser His Met Glu Asn Ser Lys
100 105 110

Arg Leu Ala Asp Met Cys Leu Ala Ala Ile Thr His Leu Tyr Leu Ser
115 120 125

Val Gly Ala Val Asp Val Thr Thr Asp Asp Ile Val Asp Gln Thr Leu
130 135 140

Arg Met Thr Ala Glu Ser Glu Val Val Met Ser Asp Val Val Leu Leu
145 150 155 160

Glu Lys Thr Leu Gly Val Val Ala Lys Pro Gln Ala Ser Phe Asp Val
165 170 175

Ser His Asn His Glu Leu Ser Ile Ala Lys Gly Glu Asn Val Gly Leu
180 185 190

Lys Thr Ser Pro Ile Lys Ser Glu Ala Thr Gln Leu Ser Glu Ile Lys
195 200 205

Pro Pro Leu Ile Glu Val Ser Asp Asn Asn Thr Ser Asn Leu Thr Lys

210		215		220
Lys Thr Tyr Pro Thr Glu Thr Leu Gln Pro Val Leu Thr Pro Lys Gln				
225		230		235
				240
Thr Gln Asp Val Gln Arg Thr Thr Pro Ala Ile Lys Lys Ser His Val				
	245		250	255

Met Leu Val

<210> 11
 <211> 87
 <212> PRT
 <213> Varicella zoster

<400> 11

Met Gly Ser Ile Thr Ala Ser Phe Ile Leu Ile Thr Met Gln Ile Leu
1 5 10 15

Phe Phe Cys Glu Asp Ser Ser Gly Glu Pro Asn Phe Ala Glu Arg Asn
20 25 30

Phe Trp His Ala Ser Cys Ser Ala Arg Gly Val Tyr Ile Asp Gly Ser
35 40 45

Met Ile Thr Thr Leu Phe Phe Tyr Ala Ser Leu Leu Gly Val Cys Val
50 55 60

Ala Leu Ile Ser Leu Ala Tyr His Ala Cys Phe Arg Leu Phe Thr Arg
65 70 75 80

Ser Val Leu Arg Ser Thr Trp
85

<210> 12
 <211> 302
 <212> PRT
 <213> Varicella zoster

<400> 12

Met Ala Ser Ser Asp Gly Asp Arg Leu Cys Arg Ser Asn Ala Val Arg
1 5 10 15

Arg Lys Thr Thr Pro Ser Tyr Ser Gly Gln Tyr Arg Thr Ala Arg Arg
 20 25 30
 Ser Val Val Val Gly Pro Pro Asp Asp Ser Asp Asp Ser Leu Gly Tyr
 35 40 45
 Ile Thr Thr Val Gly Ala Asp Ser Pro Ser Pro Val Tyr Ala Asp Leu
 50 55 60
 Tyr Phe Glu His Lys Asn Thr Thr Pro Arg Val His Gln Pro Asn Asp
 65 70 75 80
 Ser Ser Gly Ser Glu Asp Asp Phe Glu Asp Ile Asp Glu Val Val Ala
 85 90 95
 Ala Phe Arg Glu Ala Arg Leu Arg His Glu Leu Val Glu Asp Ala Val
 100 105 110
 Tyr Glu Asn Pro Leu Ser Val Glu Lys Pro Ser Arg Ser Phe Thr Lys
 115 120 125
 Asn Ala Ala Val Lys Pro Lys Leu Glu Asp Ser Pro Lys Arg Ala Pro
 130 135 140
 Pro Gly Ala Gly Ala Ile Ala Ser Gly Arg Pro Ile Ser Phe Ser Thr
 145 150 155 160
 Ala Pro Lys Thr Ala Thr Ser Ser Trp Cys Gly Pro Thr Pro Ser Tyr
 165 170 175
 Asn Lys Arg Val Phe Cys Glu Ala Val Arg Arg Val Ala Ala Met Gln
 180 185 190
 Ala Gln Lys Ala Ala Glu Ala Ala Trp Asn Ser Asn Pro Pro Arg Asn
 195 200 205
 Asn Ala Glu Leu Asp Arg Leu Leu Thr Gly Ala Val Ile Arg Ile Thr
 210 215 220
 Val His Glu Gly Leu Asn Leu Ile Gln Ala Ala Asn Glu Ala Asp Leu
 225 230 235 240
 Gly Glu Gly Ala Ser Val Ser Lys Arg Gly His Asn Arg Lys Thr Gly

Lys Gln Pro Thr Gly Leu Pro Ala Tyr Val Gln Glu Val Gln Asp Ser
 145 150 155 160

Phe Thr Val Glu Leu Arg Ala Arg Glu Glu Ala Tyr Thr Lys Leu Leu
 165 170 175

Val Thr Tyr Cys Lys Ser Ile Ile Arg Tyr Leu Gln Gly Thr Ala Lys
 180 185 190

Arg Thr Thr Ile Gly Leu Asn Ile Gln Asn Pro Asp Gln Lys Ala Tyr
 195 200 205

Thr Gln Leu Arg Gln Ser Ile Leu Leu Arg Tyr Tyr Arg Glu Val Ala
 210 215 220

Ser Leu Ala Arg Leu Leu Tyr Leu His Leu Tyr Leu Thr Val Thr Arg
 225 230 235 240

Glu Phe Ser Trp Arg Leu Tyr Ala Ser Gln Ser Ala His Pro Asp Val
 245 250 255

Phe Ala Ala Leu Lys Phe Thr Trp Thr Glu Arg Arg Gln Phe Thr Cys
 260 265 270

Ala Phe His Pro Val Leu Cys Asn His Gly Ile Val Leu Leu Glu Gly
 275 280 285

Lys Pro Leu Thr Ala Ser Ala Leu Arg Glu Ile Asn Tyr Arg Arg Arg
 290 295 300

Glu Leu Gly Leu Pro Leu Val Arg Cys Gly Leu Val Glu Glu Asn Lys
 305 310 315 320

Ser Pro Leu Val Gln Gln Pro Ser Phe Ser Val His Leu Pro Arg Ser
 325 330 335

Val Gly Phe Leu Thr His His Ile Lys Arg Lys Leu Asp Ala Tyr Ala
 340 345 350

Val Lys His Pro Gln Glu Pro Arg His Val Arg Ala Asp His Pro Tyr
 355 360 365

Ala Lys Val Val Glu Asn Arg Asn Tyr Gly Ser Ser Ile Glu Ala Met
 370 375 380

Ile Leu Ala Pro Pro Ser Pro Ser Glu Ile Leu Pro Gly Asp Pro Pro
 385 390 395 400

Arg Pro Pro Thr Cys Gly Phe Leu Thr Arg
 405 410

<210> 14
 <211> 819
 <212> PRT
 <213> Varicella zoster

<400> 14

Met Gln Ser Gly His Tyr Asn Arg Arg Gln Ser Arg Arg Gln Arg Ile
 1 5 10 15

Ser Ser Asn Thr Thr Asp Ser Pro Arg His Thr His Gly Thr Arg Tyr
 20 25 30

Arg Ser Thr Asn Trp Tyr Thr His Pro Pro Gln Ile Leu Ser Asn Ser
 35 40 45

Glu Thr Leu Val Ala Val Gln Glu Leu Leu Asn Ser Glu Met Asp Gln
 50 55 60

Asp Ser Ser Ser Asp Ala Ser Asp Asp Phe Pro Gly Tyr Ala Leu His
 65 70 75 80

His Ser Thr Tyr Asn Gly Ser Glu Gln Asn Thr Ser Thr Ser Arg His
 85 90 95

Glu Asn Arg Ile Phe Lys Leu Thr Glu Arg Glu Ala Asn Glu Glu Ile
 100 105 110

Asn Ile Asn Thr Asp Ala Ile Asp Asp Glu Gly Glu Ala Glu Glu Gly
 115 120 125

Glu Ala Glu Glu Asp Ala Ile Asp Asp Glu Gly Glu Ala Glu Glu Gly
 130 135 140

Glu Ala Glu Glu Asp Ala Ile Asp Asp Glu Gly Glu Ala Glu Glu Gly
 145 150 155 160

Glu	Ala	Glu	Glu	Asp	Ala	Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Gly	165	170	175
Glu	Ala	Glu	Glu	Gly	Glu	Ala	Glu	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Ala	180	185	190
Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Ala	Ala	Glu	Glu	Asp	Ala	195	200	205
Ile	Asp	Asp	Glu	Gly	Glu	Ala	Glu	Glu	Asp	Tyr	Phe	Ser	Val	Ser	Gln	210	215	220
Val	Cys	Ser	Arg	Asp	Ala	Asp	Glu	Val	Tyr	Phe	Thr	Leu	Asp	Pro	Glu	225	230	235
Ile	Ser	Tyr	Ser	Thr	Asp	Leu	Arg	Ile	Ala	Lys	Val	Met	Glu	Pro	Ala	245	250	255
Val	Ser	Lys	Glu	Leu	Asn	Val	Ser	Lys	Arg	Cys	Val	Glu	Pro	Val	Thr	260	265	270
Leu	Thr	Gly	Ser	Met	Leu	Ala	His	Asn	Gly	Phe	Asp	Glu	Ser	Trp	Phe	275	280	285
Ala	Met	Arg	Glu	Cys	Thr	Arg	Arg	Glu	Tyr	Ile	Thr	Val	Gln	Gly	Leu	290	295	300
Tyr	Asp	Pro	Ile	His	Leu	Arg	Tyr	Gln	Phe	Asp	Thr	Ser	Arg	Met	Thr	305	310	315
Pro	Pro	Gln	Ile	Leu	Arg	Thr	Ile	Pro	Ala	Leu	Pro	Asn	Met	Thr	Leu	325	330	335
Gly	Glu	Leu	Leu	Leu	Ile	Phe	Pro	Ile	Glu	Phe	Met	Ala	Gln	Pro	Ile	340	345	350
Ser	Ile	Glu	Arg	Ile	Leu	Val	Glu	Asp	Val	Phe	Leu	Asp	Arg	Arg	Ala	355	360	365
Ser	Ser	Lys	Thr	His	Lys	Tyr	Gly	Pro	Arg	Trp	Asn	Ser	Val	Tyr	Ala	370	375	380

Leu Pro Tyr Asn Ala Gly Lys Met Tyr Val Gln His Ile Pro Gly Phe
 385 390 395 400

Tyr Asp Val Ser Leu Arg Ala Val Gly Gln Gly Thr Ala Ile Trp His
 405 410 415

His Met Ile Leu Ser Thr Ala Ala Cys Ala Ile Ser Asn Arg Ile Ser
 420 425 430

His Gly Asp Gly Leu Gly Phe Leu Leu Asp Ala Ala Ile Arg Ile Ser
 435 440 445

Ala Asn Cys Ile Phe Leu Gly Arg Asn Asp Asn Phe Gly Val Gly Asp
 450 455 460

Pro Cys Trp Leu Glu Asp His Leu Ala Gly Leu Pro Arg Glu Ala Val
 465 470 475 480

Pro Asp Val Leu Gln Val Thr Gln Leu Val Leu Pro Asn Arg Gly Pro
 485 490 495

Thr Val Ala Ile Met Arg Gly Phe Phe Gly Ala Leu Ala Tyr Trp Pro
 500 505 510

Glu Leu Arg Ile Ala Ile Ser Glu Pro Ser Thr Ser Leu Val Arg Tyr
 515 520 525

Ala Thr Gly His Met Glu Leu Ala Glu Trp Phe Leu Phe Ser Arg Thr
 530 535 540

His Ser Leu Lys Pro Gln Phe Thr Pro Thr Glu Arg Glu Met Leu Ala
 545 550 555 560

Ser Phe Phe Thr Leu Tyr Val Thr Leu Gly Gly Gly Met Leu Asn Trp
 565 570 575

Ile Cys Arg Ala Thr Ala Met Tyr Leu Ala Ala Pro Tyr His Ser Arg
 580 585 590

Ser Ala Tyr Ile Ala Val Cys Glu Ser Leu Pro Tyr Tyr Tyr Ile Pro
 595 600 605

Val Asn Ser Asp Leu Leu Cys Asp Leu Glu Val Leu Leu Leu Gly Glu
610 615 620

Val Asp Leu Pro Thr Val Cys Glu Ser Tyr Ala Thr Ile Ala His Glu
625 630 635 640

Leu Thr Gly Tyr Glu Ala Val Arg Thr Ala Ala Thr Asn Phe Met Ile
645 650 655

Glu Phe Ala Asp Cys Tyr Lys Glu Ser Glu Thr Asp Leu Met Val Ser
660 665 670

Ala Tyr Leu Gly Ala Val Leu Leu Leu Gln Arg Val Leu Gly His Ala
675 680 685

Asn Leu Leu Leu Leu Leu Leu Ser Gly Ala Ala Leu Tyr Gly Gly Cys
690 695 700

Ser Ile Tyr Ile Pro Arg Gly Ile Leu Asp Ala Tyr Asn Thr Leu Met
705 710 715 720

Leu Ala Ala Ser Pro Leu Tyr Ala His Gln Thr Leu Thr Ser Phe Trp
725 730 735

Lys Asp Arg Asp Asp Ala Met Gln Thr Leu Gly Ile Arg Pro Thr Thr
740 745 750

Asp Val Leu Pro Lys Glu Gln Asp Arg Ile Val Gln Ala Ser Pro Ile
755 760 765

Glu Met Asn Phe Arg Phe Val Gly Leu Glu Thr Ile Tyr Pro Arg Glu
770 775 780

Gln Pro Ile Pro Ser Val Asp Leu Ala Glu Asn Leu Met Gln Tyr Arg
785 790 795 800

Asn Glu Ile Leu Gly Leu Asp Trp Lys Ser Val Ala Met His Leu Leu
805 810 815

Arg Lys Tyr

<210> 15

<211> 661
 <212> PRT
 <213> Varicella zoster

<400> 15

Met Phe Ser Arg Phe Ala Arg Ser Phe Ser Ser Asp Asp Arg Thr Arg
 1 5 10 15

Lys Ser Tyr Asp Gly Ser Tyr Gln Ser Phe Asn Ala Gly Glu Arg Asp
 20 25 30

Leu Pro Thr Pro Thr Arg Asp Trp Cys Ser Ile Ser Gln Arg Ile Thr
 35 40 45

Ser Glu Arg Val Arg Asp Gly Cys Leu Ile Pro Thr Pro Gly Glu Ala
 50 55 60

Leu Glu Thr Ala Val Lys Ala Leu Ser Glu Lys Thr Asp Ser Leu Thr
 65 70 75 80

Ser Pro Val Leu Gln Ser Thr Glu Arg His Ser Val Leu Leu Gly Leu
 85 90 95

His His Asn Asn Val Pro Glu Ser Leu Val Val Ser Cys Met Ser Asn
 100 105 110

Asp Val His Asp Gly Phe Met Gln Arg Tyr Met Glu Thr Ile Gln Arg
 115 120 125

Cys Leu Asp Asp Leu Lys Leu Ser Gly Asp Gly Leu Trp Trp Val Tyr
 130 135 140

Glu Asn Thr Tyr Trp Gln Tyr Leu Lys Tyr Thr Thr Gly Ala Glu Val
 145 150 155 160

Pro Val Thr Ser Glu Lys Val Asn Lys Lys Ser Lys Ser Thr Val Leu
 165 170 175

Leu Phe Ser Ser Val Val Ala Asn Lys Pro Ile Ser Arg His Pro Phe
 180 185 190

Lys Ser Lys Val Ile Asn Ser Asp Tyr Arg Gly Ile Cys Gln Glu Leu
 195 200 205

Arg Glu Ala Leu Gly Ala Val Gln Lys Tyr Met Tyr Phe Met Arg Pro
 210 215 220

Asp Asp Pro Thr Asn Pro Ser Pro Asp Thr Arg Ile Arg Val Gln Glu
 225 230 235 240

Ile Ala Ala Tyr Thr Ala Thr Gly Tyr Gly Trp Met Leu Trp Phe Leu
 245 250 255

Asp Val Val Asp Ala Arg Val Cys Arg His Leu Lys Leu Gln Phe Arg
 260 265 270

Arg Ile Arg Gly Pro Arg Ala Ser Val Ile Pro Asp Asp Leu Leu Arg
 275 280 285

Arg His Leu Lys Thr Gly Pro Ala Val Ser Ala Gly Thr Gly Val Ala
 290 295 300

Phe Ile Leu Ala Ala Thr Thr Ala Ser Ala Leu Thr Ala Leu Leu Arg
 305 310 315 320

Ile Ser Val Leu Trp Arg Lys Glu Glu Trp Arg Asp Gly Leu Asn Gly
 325 330 335

Thr Ala Ala Ala Ile Val Ala Ala Val Glu Leu Ile Thr Leu Leu His
 340 345 350

His His Phe Gln Tyr Leu Ile Asn Met Met Leu Ile Gly Tyr Ala Cys
 355 360 365

Trp Gly Asp Gly Gly Leu Asn Asp Pro Tyr Ile Leu Lys Ala Leu Arg
 370 375 380

Ala Gln Gly Arg Phe Leu Tyr Phe Ala Gly Gln Leu Val Arg Thr Met
 385 390 395 400

Ser Thr His Ser Trp Val Val Leu Glu Thr Ser Thr His Met Trp Phe
 405 410 415

Ser Arg Ala Val Ala Gln Ser Ile Leu Ala His Gly Gly Lys Pro Thr
 420 425 430

Lys Tyr Tyr Ala Gln Val Leu Ala Ala Ser Lys Arg Tyr Thr Pro Leu
435 440 445

His Leu Arg Arg Ile Ser Glu Pro Ser Ser Val Ser Asp Gln Pro Tyr
450 455 460

Ile Arg Phe Asn Arg Leu Gly Ser Pro Ile Gly Thr Gly Ile Gly Asn
465 470 475 480

Leu Glu Cys Val Cys Leu Thr Gly Asn Tyr Leu Ser Asp Asp Val Asn
485 490 495

Ala Ser Ser His Val Ile Asn Thr Glu Ala Pro Leu Asn Ser Ile Ala
500 505 510

Pro Asp Thr Asn Arg Gln Arg Thr Ser Arg Val Leu Val Arg Pro Asp
515 520 525

Thr Gly Leu Asp Val Thr Val Arg Lys Asn His Cys Leu Asp Ile Gly
530 535 540

His Thr Asp Gly Ser Pro Val Asp Pro Thr Tyr Pro Asp His Tyr Thr
545 550 555 560

Arg Ile Lys Ala Glu Tyr Glu Gly Pro Val Arg Asp Glu Ser Asn Thr
565 570 575

Met Phe Asp Gln Arg Ser Asp Leu Arg His Ile Glu Thr Gln Ala Ser
580 585 590

Leu Asn Asp His Val Tyr Glu Asn Ile Pro Pro Lys Glu Val Gly Phe
595 600 605

Asn Ser Ser Ser Asp Leu Asp Val Asp Ser Leu Asn Gly Tyr Thr Ser
610 615 620

Gly Asp Met His Thr Asp Asp Asp Leu Ser Pro Asp Phe Ile Pro Asn
625 630 635 640

Asp Val Pro Val Arg Cys Lys Thr Thr Val Thr Phe Arg Lys Asn Thr
645 650 655

Pro Lys Ser His His

660

<210> 16
<211> 301
<212> PRT
<213> Varicella zoster

<400> 16

Met Gly Asp Leu Ser Cys Trp Thr Lys Val Pro Gly Phe Thr Leu Thr
1 5 10 15

Gly Glu Leu Gln Tyr Leu Lys Gln Val Asp Asp Ile Leu Arg Tyr Gly
20 25 30

Val Arg Lys Arg Asp Arg Thr Gly Ile Gly Thr Leu Ser Leu Phe Gly
35 40 45

Met Gln Ala Arg Tyr Asn Leu Arg Asn Glu Phe Pro Leu Leu Thr Thr
50 55 60

Lys Arg Val Phe Trp Arg Ala Val Val Glu Glu Leu Leu Trp Phe Ile
65 70 75 80

Arg Gly Ser Thr Asp Ser Lys Glu Leu Ala Ala Lys Asp Ile His Ile
85 90 95

Trp Asp Ile Tyr Gly Ser Ser Lys Phe Leu Asn Arg Asn Gly Phe His
100 105 110

Lys Arg His Thr Gly Asp Leu Gly Pro Ile Tyr Gly Phe Gln Trp Arg
115 120 125

His Phe Gly Ala Glu Tyr Lys Asp Cys Gln Ser Asn Tyr Leu Gln Gln
130 135 140

Gly Ile Asp Gln Leu Gln Thr Val Ile Asp Thr Ile Lys Thr Asn Pro
145 150 155 160

Glu Ser Arg Arg Met Ile Ile Ser Ser Trp Asn Pro Lys Asp Ile Pro
165 170 175

Leu Met Val Leu Pro Pro Cys His Thr Leu Cys Gln Phe Tyr Val Ala
180 185 190

Asn Gly Glu Leu Ser Cys Gln Val Tyr Gln Arg Ser Gly Asp Met Gly
195 200 205

Leu Gly Val Pro Phe Asn Ile Ala Gly Tyr Ala Leu Leu Thr Tyr Ile
210 215 220

Val Ala His Val Thr Gly Leu Lys Thr Gly Asp Leu Ile His Thr Met
225 230 235 240

Gly Asp Ala His Ile Tyr Leu Asn His Ile Asp Ala Leu Lys Val Gln
245 250 255

Leu Ala Arg Ser Pro Lys Pro Phe Pro Cys Leu Lys Ile Ile Arg Asn
260 265 270

Val Thr Asp Ile Asn Asp Phe Lys Trp Asp Asp Phe Gln Leu Asp Gly
275 280 285

Tyr Asn Pro His Pro Pro Leu Lys Met Glu Met Ala Leu
290 295 300

<210> 17
<211> 455
<212> PRT
<213> Varicella zoster

<400> 17

Met Gly Leu Phe Gly Leu Thr Arg Phe Ile His Glu His Lys Leu Val
1 5 10 15

Lys Pro Ser Ile Ile Ser Thr Pro Pro Gly Val Leu Thr Pro Val Ala
20 25 30

Val Asp Val Trp Asn Val Met Tyr Thr Leu Leu Glu Arg Leu Tyr Pro
35 40 45

Val Gly Lys Arg Glu Asn Leu His Gly Pro Ser Val Thr Ile His Cys
50 55 60

Leu Gly Val Leu Leu Arg Leu Leu Thr Gln Arg Ser Tyr Tyr Pro Ile
65 70 75 80

Phe Val Leu Glu Arg Cys Thr Asp Gly Pro Leu Ser Arg Gly Ala Lys

Asp Ser Trp Arg His Gly Glu Val Phe Lys Ser Leu Thr Val Ala Thr
325 330 335

Ser Gly Lys Thr Glu Asn Gly Val Ser Val Ser Lys Tyr Ala Ser Asn
340 345 350

Arg Ser Glu Val Thr Val Asp Ala Ser Trp Ala Leu Asn Leu Leu Pro
355 360 365

Pro Ser Ser Ser Pro Leu Asp Asn Leu Glu Arg Ala Phe Val Glu His
370 375 380

Ile Ile Ala Val Val Thr Pro Leu Thr Arg Gly Arg Leu Lys Leu Met
385 390 395 400

Lys Arg Val Asn Ile Met Gln Asn Thr Ala Asp Pro Tyr Met Val Ile
405 410 415

Asn Thr Leu Tyr His Asn Leu Lys Gly Glu Lys Met Ala Arg Gln Tyr
420 425 430

Ala Arg Ile Phe Lys Gln Phe Ile Pro Thr Pro Leu Pro Leu Asn Thr
435 440 445

Val Leu Thr Lys Tyr Trp Asn
450 455

<210> 18
<211> 1038
<212> PRT
<213> Varicella zoster

<400> 18

Met Glu Glu Pro Ile Cys Tyr Asp Thr Gln Lys Leu Leu Asp Asp Leu
1 5 10 15

Ser Asn Leu Lys Val Gln Glu Ala Asp Asn Glu Arg Pro Trp Ser Pro
20 25 30

Glu Lys Thr Glu Ile Ala Arg Val Lys Val Val Lys Phe Leu Arg Ser
35 40 45

Thr	Gln	Lys	Ile	Pro	Ala	Lys	His	Phe	Ile	Gln	Ile	Trp	Glu	Pro	Leu		
50						55					60						
His	Ser	Asn	Ile	Cys	Phe	Val	Tyr	Ser	Asn	Thr	Phe	Leu	Ala	Glu	Ala		
65					70					75					80		
Ala	Phe	Thr	Ala	Glu	Asn	Leu	Pro	Gly	Leu	Leu	Phe	Trp	Arg	Leu	Asp		
				85					90					95			
Leu	Asp	Trp	Thr	Ile	Glu	Glu	Pro	Gly	Asn	Ser	Leu	Lys	Ile	Leu	Thr		
			100					105					110				
Gln	Leu	Ser	Ser	Val	Val	Gln	Asp	Ser	Glu	Thr	Leu	His	Arg	Leu	Ser		
		115					120					125					
Ala	Asn	Lys	Leu	Arg	Thr	Ser	Ser	Lys	Phe	Gly	Pro	Val	Ser	Ile	His		
	130						135				140						
Phe	Ile	Ile	Thr	Asp	Trp	Ile	Asn	Met	Tyr	Glu	Val	Ala	Leu	Lys	Asp		
145					150					155					160		
Ala	Thr	Thr	Ala	Ile	Glu	Ser	Pro	Phe	Thr	His	Ala	Arg	Ile	Gly	Met		
				165					170					175			
Leu	Glu	Ser	Ala	Ile	Ala	Ala	Leu	Thr	Gln	His	Lys	Phe	Ala	Ile	Ile		
			180					185					190				
Tyr	Asp	Met	Pro	Phe	Val	Gln	Glu	Gly	Ile	Arg	Val	Leu	Thr	Gln	Tyr		
	195						200					205					
Ala	Gly	Trp	Leu	Leu	Pro	Phe	Asn	Val	Met	Trp	Asn	Gln	Ile	Gln	Asn		
	210						215				220						
Ser	Ser	Leu	Thr	Pro	Leu	Thr	Arg	Ala	Leu	Phe	Ile	Ile	Cys	Met	Ile		
225					230					235					240		
Asp	Glu	Tyr	Leu	Thr	Glu	Thr	Pro	Val	His	Ser	Ile	Ser	Glu	Leu	Phe		
				245					250					255			
Ala	Asp	Thr	Val	Asn	Leu	Ile	Lys	Asp	Glu	Ala	Phe	Val	Ser	Ile	Glu		
			260					265					270				
Glu	Ala	Val	Thr	Asn	Pro	Arg	Thr	Val	His	Glu	Ser	Arg	Ile	Ser	Ser		

275				280				285							
Ala	Leu	Ala	Tyr	Arg	Asp	Pro	Tyr	Val	Phe	Glu	Thr	Ser	Pro	Gly	Met
	290					295					300				
Leu	Ala	Arg	Arg	Leu	Arg	Leu	Asp	Asn	Gly	Ile	Trp	Glu	Ser	Asn	Leu
305					310					315					320
Leu	Ser	Leu	Ser	Thr	Pro	Gly	Ile	His	Ile	Glu	Ala	Leu	Leu	His	Leu
				325					330					335	
Leu	Asn	Ser	Asp	Pro	Glu	Ala	Glu	Thr	Thr	Ser	Gly	Ser	Asn	Val	Ala
			340					345					350		
Glu	His	Thr	Arg	Gly	Ile	Trp	Glu	Lys	Val	Gln	Ala	Ser	Thr	Ser	Pro
		355					360					365			
Ser	Met	Leu	Ile	Ser	Thr	Leu	Ala	Glu	Ser	Gly	Phe	Thr	Arg	Phe	Ser
	370					375					380				
Cys	Lys	Leu	Leu	Arg	Arg	Phe	Ile	Ala	His	His	Thr	Leu	Ala	Gly	Phe
385					390					395					400
Ile	His	Gly	Ser	Val	Val	Ala	Asp	Glu	His	Ile	Thr	Asp	Phe	Gln	Gln
				405					410					415	
Thr	Leu	Gly	Cys	Leu	Ala	Leu	Val	Gly	Gly	Leu	Ala	Tyr	Gln	Leu	Val
			420					425					430		
Glu	Thr	Tyr	Ala	Pro	Thr	Thr	Glu	Tyr	Val	Leu	Thr	Tyr	Thr	Arg	Thr
		435					440					445			
Val	Asn	Glu	Thr	Glu	Lys	Arg	Tyr	Glu	Thr	Leu	Leu	Pro	Ala	Leu	Gly
	450					455					460				
Leu	Pro	Pro	Gly	Gly	Leu	Gly	Gln	Ile	Met	Arg	Arg	Cys	Phe	Ala	Pro
465					470					475					480
Arg	Pro	Leu	Ile	Glu	Ser	Ile	Gln	Ala	Thr	Arg	Val	Ile	Leu	Leu	Asn
				485					490					495	
Glu	Ile	Ser	His	Ala	Glu	Ala	Arg	Glu	Thr	Thr	Tyr	Phe	Lys	Gln	Thr
			500					505					510		

His Asn Gln Ser Ser Gly Ala Leu Leu Pro Gln Ala Gly Gln Ser Ala
515 520 525

Val Arg Glu Ala Val Leu Thr Trp Phe Asp Leu Arg Met Asp Ser Arg
530 535 540

Trp Gly Ile Thr Pro Pro Val Asp Val Gly Met Thr Pro Pro Ile Cys
545 550 555 560

Val Asp Pro Pro Ala Thr Gly Leu Glu Ala Val Met Ile Thr Glu Ala
565 570 575

Leu Lys Ile Ala Tyr Pro Thr Glu Tyr Asn Arg Ser Ser Val Phe Val
580 585 590

Glu Pro Ser Phe Val Pro Tyr Ile Ile Ala Thr Ser Thr Leu Asp Ala
595 600 605

Leu Ser Ala Thr Ile Ala Leu Ser Phe Asp Thr Arg Gly Ile Gln Gln
610 615 620

Ala Leu Ser Ile Leu Gln Trp Ala Arg Asp Tyr Gly Ser Gly Thr Val
625 630 635 640

Pro Asn Ala Asp Gly Tyr Arg Thr Lys Leu Ser Ala Leu Ile Thr Ile
645 650 655

Leu Glu Pro Phe Thr Arg Thr His Pro Pro Val Leu Leu Pro Ser His
660 665 670

Val Ser Thr Ile Asp Ser Leu Ile Cys Glu Leu His Arg Thr Val Gly
675 680 685

Ile Ala Val Asp Leu Leu Pro Gln His Val Arg Pro Leu Val Pro Asp
690 695 700

Arg Pro Ser Ile Thr Asn Ser Val Phe Leu Ala Thr Leu Tyr Tyr Asp
705 710 715 720

Glu Leu Tyr Gly Arg Trp Thr Arg Leu Asp Lys Thr Ser Gln Ala Leu
725 730 735

Val Glu Asn Phe Thr Ser Asn Ala Leu Val Val Ser Arg Tyr Met Leu
740 745 750

Met Leu Gln Lys Phe Phe Ala Cys Arg Phe Tyr Pro Thr Pro Asp Leu
755 760 765

Gln Ala Val Gly Ile Cys Asn Pro Lys Val Glu Arg Asp Glu Gln Phe
770 775 780

Gly Val Trp Arg Leu Asn Asp Leu Ala Asp Ala Val Gly His Ile Val
785 790 795 800

Gly Thr Ile Gln Gly Ile Arg Thr Gln Met Arg Val Gly Ile Ser Ser
805 810 815

Leu Arg Thr Ile Met Ala Asp Ala Ser Ser Ala Leu Arg Glu Cys Glu
820 825 830

Asn Leu Met Thr Lys Thr Ser Thr Ser Ala Ile Gly Pro Leu Phe Ser
835 840 845

Thr Met Ala Ser Arg Tyr Ala Arg Phe Thr Gln Asp Gln Met Asp Ile
850 855 860

Leu Met Arg Val Asp Lys Leu Thr Thr Gly Glu Asn Ile Pro Gly Leu
865 870 875 880

Ala Asn Val Glu Ile Phe Leu Asn Arg Trp Glu Arg Ile Ala Thr Ala
885 890 895

Cys Arg His Ala Thr Ala Val Pro Ser Ala Glu Ser Ile Ala Thr Val
900 905 910

Cys Asn Glu Leu Arg Arg Gly Leu Lys Asn Ile Gln Glu Asp Arg Val
915 920 925

Asn Ala Pro Thr Ser Tyr Met Ser His Ala Arg Asn Leu Glu Asp His
930 935 940

Lys Ala Ala Val Ser Phe Val Met Asp Ser Arg Gln Gln Phe Ile Val
945 950 955 960

Asp Ser Gly Pro Gln Met Gly Ala Val Leu Thr Ser Gln Cys Asn Ile
965 970 975

Gly Thr Trp Glu Asn Val Asn Ala Thr Phe Leu His Asp Asn Val Lys
980 985 990

Ile Thr Thr Thr Val Arg Asp Val Ile Ser Glu Ala Pro Thr Leu Ile
995 1000 1005

Ile Gly Gln Arg Trp Leu Arg Pro Asp Glu Ile Leu Ser Asn Val
1010 1015 1020

Asp Leu Arg Leu Gly Val Pro Gly Asn Thr Ser Gly Ser Asp Pro
1025 1030 1035

<210> 19
<211> 2763
<212> PRT
<213> Varicella zoster

<400> 19

Met Asp Ile Ile Pro Pro Ile Ala Val Thr Val Ala Gly Val Gly Ser
1 5 10 15

Arg Asn Gln Phe Asp Gly Ala Leu Gly Pro Ala Ser Gly Leu Ser Cys
20 25 30

Leu Arg Thr Ser Leu Ser Phe Leu His Met Thr Tyr Ala His Gly Ile
35 40 45

Asn Ala Thr Leu Ser Ser Asp Met Ile Asp Gly Cys Leu Gln Glu Gly
50 55 60

Ala Ala Trp Thr Thr Asp Leu Ser Asn Met Gly Arg Gly Val Pro Asp
65 70 75 80

Met Cys Ala Leu Val Asp Leu Pro Asn Arg Ile Ser Tyr Ile Lys Leu
85 90 95

Gly Asp Thr Thr Ser Thr Cys Cys Val Leu Ser Arg Ile Tyr Gly Asp
100 105 110

Ser His Phe Phe Thr Val Pro Asp Glu Gly Phe Met Cys Thr Gln Ile
115 120 125

Pro Ala Arg Ala Phe Phe Asp Asp Val Trp Met Gly Arg Glu Glu Ser
130 135 140

Tyr Thr Ile Ile Thr Val Asp Ser Thr Gly Met Ala Ile Tyr Arg Gln
145 150 155 160

Gly Asn Ile Ser Phe Ile Phe Asp Pro His Gly His Gly Thr Ile Gly
165 170 175

Gln Ala Val Val Val Arg Val Asn Thr Thr Asp Val Tyr Ser Tyr Ile
180 185 190

Ala Ser Glu Tyr Thr His Arg Pro Asp Asn Val Glu Ser Gln Trp Ala
195 200 205

Ala Ala Leu Val Phe Phe Val Thr Ala Asn Asp Gly Pro Val Ser Glu
210 215 220

Glu Ala Leu Ser Ser Ala Val Thr Leu Ile Tyr Gly Ser Cys Asp Thr
225 230 235 240

Tyr Phe Thr Asp Glu Gln Tyr Cys Glu Lys Leu Val Thr Ala Gln His
245 250 255

Pro Leu Leu Leu Ser Pro Pro Asn Ser Thr Thr Ile Val Leu Asn Lys
260 265 270

Ser Ser Ile Val Pro Leu His Gln Asn Val Gly Glu Ser Val Ser Leu
275 280 285

Glu Ala Thr Leu His Ser Thr Leu Thr Asn Thr Val Ala Leu Asp Pro
290 295 300

Arg Cys Ser Tyr Ser Glu Val Asp Pro Trp His Ala Val Leu Glu Thr
305 310 315 320

Thr Ser Thr Gly Ser Gly Val Leu Asp Cys Arg Arg Arg Arg Arg Pro
325 330 335

Ser Trp Thr Pro Pro Ser Ser Glu Glu Asn Leu Ala Cys Ile Asp Asp
340 345 350

Gly Leu Val Asn Asn Thr His Ser Thr Asp Asn Leu His Lys Pro Ala
355 360 365

Lys Lys Val Leu Lys Phe Lys Pro Thr Val Asp Val Pro Asp Lys Thr
370 375 380

Gln Val Ala His Val Leu Pro Arg Leu Arg Glu Val Ala Asn Thr Pro
385 390 395 400

Asp Val Val Leu Asn Val Ser Asn Val Asp Thr Pro Glu Ser Ser Pro
405 410 415

Thr Phe Ser Arg Asn Met Asn Val Gly Ser Ser Leu Lys Asp Arg Lys
420 425 430

Pro Phe Leu Phe Glu Gln Ser Gly Asp Val Asn Met Val Val Glu Lys
435 440 445

Leu Leu Gln His Gly His Glu Ile Ser Asn Gly Tyr Val Gln Asn Ala
450 455 460

Val Gly Thr Leu Asp Thr Val Ile Thr Gly His Thr Asn Val Pro Ile
465 470 475 480

Trp Val Thr Arg Pro Leu Val Met Pro Asp Glu Lys Asp Pro Leu Glu
485 490 495

Leu Phe Ile Asn Leu Thr Ile Leu Arg Leu Thr Gly Phe Val Val Glu
500 505 510

Asn Gly Thr Arg Thr His His Gly Ala Thr Ser Val Val Ser Asp Phe
515 520 525

Ile Gly Pro Leu Gly Glu Ile Leu Thr Gly Phe Pro Ser Ala Ala Glu
530 535 540

Leu Ile Arg Val Thr Ser Leu Ile Leu Thr Asn Met Pro Gly Ala Glu
545 550 555 560

Tyr Ala Ile Lys Thr Val Leu Arg Lys Lys Cys Thr Ile Gly Met Leu
565 570 575

Ile Ile Ala Lys Phe Gly Leu Val Ala Met Arg Val Gln Asp Thr Thr
 580 585 590

Gly Ala Leu His Ala Glu Leu Asp Val Leu Glu Ala Asp Leu Gly Gly
 595 600 605

Ser Ser Pro Ile Asp Leu Tyr Ser Arg Leu Ser Thr Gly Leu Ile Ser
 610 615 620

Ile Leu Asn Ser Pro Ile Ile Ser His Pro Gly Leu Phe Ala Glu Leu
 625 630 635 640

Ile Pro Thr Arg Thr Gly Ser Leu Ser Glu Arg Ile Arg Leu Leu Cys
 645 650 655

Glu Leu Val Ser Ala Arg Glu Thr Arg Tyr Met Arg Glu His Thr Ala
 660 665 670

Leu Val Ser Ser Val Lys Ala Leu Glu Asn Ala Leu Arg Ser Thr Arg
 675 680 685

Asn Lys Ile Asp Ala Ile Gln Ile Pro Glu Val Pro Gln Glu Pro Pro
 690 695 700

Glu Glu Thr Asp Ile Pro Pro Glu Glu Leu Ile Arg Arg Val Tyr Glu
 705 710 715 720

Ile Arg Ser Glu Val Thr Met Leu Leu Thr Ser Ala Val Thr Glu Tyr
 725 730 735

Phe Thr Arg Gly Val Leu Tyr Ser Thr Arg Ala Leu Ile Ala Glu Gln
 740 745 750

Ser Pro Arg Arg Phe Arg Val Ala Thr Ala Ser Thr Ala Pro Ile Gln
 755 760 765

Arg Leu Leu Asp Ser Leu Pro Glu Phe Asp Ala Lys Leu Thr Ala Ile
 770 775 780

Ile Ser Ser Leu Ser Ile His Pro Pro Pro Glu Thr Ile Gln Asn Leu
 785 790 795 800

Pro Val Val Ser Leu Leu Lys Glu Leu Ile Lys Glu Gly Glu Asp Leu

805										810					815				
Asn	Thr	Asp	Thr	Ala	Leu	Val	Ser	Trp	Leu	Ser	Val	Val	Gly	Glu	Ala				
			820					825					830						
Gln	Thr	Ala	Gly	Tyr	Leu	Ser	Arg	Arg	Glu	Phe	Asp	Glu	Leu	Ser	Arg				
		835					840					845							
Thr	Ile	Lys	Thr	Ile	Asn	Thr	Arg	Ala	Thr	Gln	Arg	Ala	Ser	Ala	Glu				
	850					855					860								
Ala	Glu	Leu	Ser	Cys	Phe	Asn	Thr	Leu	Ser	Ala	Ala	Val	Asp	Gln	Ala				
865					870					875					880				
Val	Lys	Asp	Tyr	Glu	Thr	Tyr	Asn	Asn	Gly	Glu	Val	Lys	Tyr	Pro	Glu				
				885					890					895					
Ile	Thr	Arg	Asp	Asp	Leu	Leu	Ala	Thr	Ile	Val	Arg	Ala	Thr	Asp	Asp				
			900					905					910						
Leu	Val	Arg	Gln	Ile	Lys	Ile	Leu	Ser	Asp	Pro	Met	Ile	Gln	Ser	Gly				
		915					920					925							
Leu	Gln	Pro	Ser	Ile	Lys	Arg	Arg	Leu	Glu	Thr	Arg	Leu	Lys	Glu	Val				
	930					935					940								
Gln	Thr	Tyr	Ala	Asn	Glu	Ala	Arg	Thr	Thr	Gln	Asp	Thr	Ile	Lys	Ser				
945					950					955					960				
Arg	Lys	Gln	Ala	Ala	Tyr	Asn	Lys	Leu	Gly	Gly	Leu	Leu	Arg	Pro	Val				
				965					970					975					
Thr	Gly	Phe	Val	Gly	Leu	Arg	Ala	Ala	Val	Asp	Leu	Leu	Pro	Glu	Leu				
			980					985					990						
Ala	Ser	Glu	Leu	Asp	Val	Gln	Gly	Ala	Leu	Val	Asn	Leu	Arg	Thr	Lys				
		995					1000					1005							
Val	Leu	Glu	Ala	Pro	Val	Glu	Ile	Arg	Ser	Gln	Leu	Thr	Gly	Asp					
	1010					1015					1020								
Phe	Trp	Ala	Leu	Phe	Asn	Gln	Tyr	Arg	Asp	Ile	Leu	Glu	His	Pro					
	1025					1030					1035								

Gly	Asn	Ala	Arg	Thr	Ser	Val	Leu	Gly	Gly	Leu	Gly	Ala	Cys	Phe
1040						1045					1050			
Thr	Ala	Ile	Ile	Glu	Ile	Val	Pro	Ile	Pro	Thr	Glu	Tyr	Arg	Pro
1055						1060					1065			
Ser	Leu	Leu	Ala	Phe	Phe	Gly	Asp	Val	Ala	Asp	Val	Leu	Ala	Ser
1070						1075					1080			
Asp	Ile	Ala	Thr	Val	Ser	Thr	Asn	Pro	Glu	Ser	Glu	Ser	Ala	Ile
1085						1090					1095			
Asn	Ala	Val	Val	Ala	Thr	Leu	Ser	Lys	Ala	Thr	Leu	Val	Ser	Ser
1100						1105					1110			
Thr	Val	Pro	Ala	Leu	Ser	Phe	Val	Leu	Ser	Leu	Tyr	Lys	Lys	Tyr
1115						1120					1125			
Gln	Ala	Leu	Gln	Gln	Glu	Ile	Thr	Asn	Thr	His	Lys	Leu	Thr	Glu
1130						1135					1140			
Leu	Gln	Lys	Gln	Leu	Gly	Asp	Asp	Phe	Ser	Thr	Leu	Ala	Val	Ser
1145						1150					1155			
Ser	Gly	His	Leu	Lys	Phe	Ile	Ser	Ser	Ser	Asn	Val	Asp	Asp	Tyr
1160						1165					1170			
Glu	Ile	Asn	Asp	Ala	Ile	Leu	Ser	Ile	Gln	Thr	Asn	Val	His	Ala
1175						1180					1185			
Leu	Met	Asp	Thr	Val	Lys	Leu	Val	Glu	Val	Glu	Leu	Gln	Lys	Leu
1190						1195					1200			
Pro	Pro	His	Cys	Ile	Ala	Gly	Thr	Ser	Thr	Leu	Ser	Arg	Val	Val
1205						1210					1215			
Lys	Asp	Leu	His	Lys	Leu	Val	Thr	Met	Ala	His	Glu	Lys	Lys	Glu
1220						1225					1230			
Gln	Ala	Lys	Val	Leu	Ile	Thr	Asp	Cys	Glu	Arg	Ala	His	Lys	Gln
1235						1240					1245			

Gln Thr Thr Arg Val Leu Tyr	Glu Arg Trp Thr Arg	Asp Ile Ile
1250	1255	1260
Ala Cys Leu Glu Ala Met Glu	Thr Arg His Ile Phe	Asn Gly Thr
1265	1270	1275
Glu Leu Ala Arg Leu Arg Asp	Met Ala Ala Ala Gly	Gly Phe Asp
1280	1285	1290
Ile His Ala Val Tyr Pro Gln	Ala Arg Gln Val Val	Ala Ala Cys
1295	1300	1305
Glu Thr Thr Ala Val Thr Ala	Leu Asp Thr Val Phe	Arg His Asn
1310	1315	1320
Pro Tyr Thr Pro Glu Asn Thr	Asn Ile Pro Pro Pro	Leu Ala Leu
1325	1330	1335
Leu Arg Gly Leu Thr Trp Phe	Asp Asp Phe Ser Ile	Thr Ala Pro
1340	1345	1350
Val Phe Thr Val Met Phe Pro	Gly Val Ser Ile Glu	Gly Leu Leu
1355	1360	1365
Leu Leu Met Arg Ile Arg Ala	Val Val Leu Leu Ser	Ala Asp Thr
1370	1375	1380
Ser Ile Asn Gly Ile Pro Asn	Tyr Arg Asp Met Ile	Leu Arg Thr
1385	1390	1395
Ser Gly Asp Leu Leu Gln Ile	Pro Ala Leu Ala Gly	Tyr Val Asp
1400	1405	1410
Phe Tyr Thr Arg Ser Tyr Asp	Gln Phe Ile Thr Glu	Ser Val Thr
1415	1420	1425
Leu Ser Glu Leu Arg Ala Asp	Ile Arg Gln Ala Ala	Gly Ala Lys
1430	1435	1440
Leu Thr Glu Ala Asn Lys Ala	Leu Glu Glu Val Thr	His Val Arg
1445	1450	1455

Ala	His	Glu	Thr	Ala	Lys	Leu	Ala	Leu	Lys	Glu	Gly	Val	Phe	Ile
1460						1465					1470			
Thr	Leu	Pro	Ser	Glu	Gly	Leu	Leu	Ile	Arg	Ala	Ile	Glu	Tyr	Phe
1475						1480					1485			
Thr	Thr	Phe	Asp	His	Lys	Arg	Phe	Ile	Gly	Thr	Ala	Tyr	Glu	Arg
1490						1495					1500			
Val	Leu	Gln	Thr	Met	Val	Asp	Arg	Asp	Leu	Lys	Glu	Ala	Asn	Ala
1505						1510					1515			
Glu	Leu	Ala	Gln	Phe	Arg	Met	Val	Cys	Gln	Ala	Thr	Lys	Asn	Arg
1520						1525					1530			
Ala	Ile	Gln	Ile	Leu	Gln	Asn	Ile	Val	Asp	Thr	Ala	Asn	Ala	Thr
1535						1540					1545			
Glu	Gln	Gln	Glu	Asp	Val	Asp	Phe	Thr	Asn	Leu	Lys	Thr	Leu	Leu
1550						1555					1560			
Lys	Leu	Thr	Pro	Pro	Pro	Lys	Thr	Ile	Ala	Leu	Ala	Ile	Asp	Arg
1565						1570					1575			
Ser	Thr	Ser	Val	Gln	Asp	Ile	Val	Thr	Gln	Phe	Ala	Leu	Leu	Leu
1580						1585					1590			
Gly	Arg	Leu	Glu	Glu	Glu	Thr	Gly	Thr	Leu	Asp	Ile	Gln	Ala	Val
1595						1600					1605			
Asp	Trp	Met	Tyr	Gln	Ala	Arg	Asn	Ile	Ile	Asp	Ser	His	Pro	Leu
1610						1615					1620			
Ser	Val	Arg	Ile	Asp	Gly	Thr	Gly	Pro	Leu	His	Thr	Tyr	Lys	Asp
1625						1630					1635			
Arg	Val	Asp	Lys	Leu	Tyr	Ala	Leu	Arg	Thr	Lys	Leu	Asp	Leu	Leu
1640						1645					1650			
Arg	Arg	Arg	Ile	Glu	Thr	Gly	Glu	Val	Thr	Trp	Asp	Asp	Ala	Trp
1655						1660					1665			
Thr	Thr	Phe	Lys	Arg	Glu	Thr	Gly	Asp	Met	Leu	Ala	Ser	Gly	Asp

1670							1675								1680
Thr	Tyr	Ala	Thr	Ser	Val	Asp	Ser	Ile	Lys	Ala	Leu	Gln	Ala	Ser	
1685						1690					1695				
Ala	Ser	Val	Val	Asp	Met	Leu	Cys	Ser	Glu	Pro	Glu	Phe	Phe	Leu	
1700						1705					1710				
Leu	Pro	Val	Glu	Thr	Lys	Asn	Arg	Leu	Gln	Lys	Lys	Gln	Gln	Glu	
1715						1720					1725				
Arg	Lys	Thr	Ala	Leu	Asp	Val	Val	Leu	Gln	Lys	Gln	Arg	Gln	Phe	
1730						1735					1740				
Glu	Glu	Thr	Ala	Ser	Arg	Leu	Arg	Ala	Leu	Ile	Glu	Arg	Ile	Pro	
1745						1750					1755				
Thr	Glu	Ser	Asp	His	Asp	Val	Leu	Arg	Met	Leu	Leu	Arg	Asp	Phe	
1760						1765					1770				
Asp	Gln	Phe	Thr	His	Leu	Pro	Ile	Trp	Ile	Lys	Thr	Gln	Tyr	Met	
1775						1780					1785				
Thr	Phe	Arg	Asn	Leu	Leu	Met	Val	Arg	Leu	Gly	Leu	Tyr	Ala	Ser	
1790						1795					1800				
Tyr	Ala	Glu	Ile	Phe	Pro	Pro	Ala	Ser	Pro	Asn	Gly	Val	Phe	Ala	
1805						1810					1815				
Pro	Ile	Pro	Ala	Met	Ser	Gly	Val	Cys	Leu	Glu	Asp	Gln	Ser	Arg	
1820						1825					1830				
Cys	Ile	Arg	Ala	Arg	Val	Ala	Ala	Phe	Met	Gly	Glu	Ala	Ser	Val	
1835						1840					1845				
Val	Gln	Thr	Phe	Arg	Glu	Ala	Arg	Ser	Ser	Ile	Asp	Ala	Leu	Phe	
1850						1855					1860				
Gly	Lys	Asn	Leu	Thr	Phe	Tyr	Leu	Asp	Thr	Asp	Gly	Val	Pro	Leu	
1865						1870					1875				
Arg	Tyr	Arg	Val	Cys	Tyr	Lys	Ser	Val	Gly	Val	Lys	Leu	Gly	Thr	
1880						1885					1890				

Met	Leu	Cys	Ser	Gln	Gly	Gly	Leu	Ser	Leu	Arg	Pro	Ala	Leu	Pro
	1895					1900					1905			
Asp	Glu	Gly	Ile	Val	Glu	Glu	Thr	Thr	Leu	Ser	Ala	Leu	Arg	Val
	1910					1915					1920			
Ala	Asn	Glu	Val	Asn	Glu	Leu	Arg	Ile	Glu	Tyr	Glu	Ser	Ala	Ile
	1925					1930					1935			
Lys	Ser	Gly	Phe	Ser	Ala	Phe	Ser	Thr	Phe	Val	Arg	His	Arg	His
	1940					1945					1950			
Ala	Glu	Trp	Gly	Lys	Thr	Asn	Ala	Arg	Arg	Ala	Ile	Ala	Glu	Ile
	1955					1960					1965			
Tyr	Ala	Gly	Leu	Ile	Thr	Thr	Thr	Leu	Thr	Arg	Gln	Tyr	Gly	Val
	1970					1975					1980			
His	Trp	Asp	Lys	Leu	Ile	Tyr	Ser	Phe	Glu	Lys	His	His	Leu	Thr
	1985					1990					1995			
Ser	Val	Met	Gly	Asn	Gly	Leu	Thr	Lys	Pro	Ile	Gln	Arg	Arg	Gly
	2000					2005					2010			
Asp	Val	Arg	Val	Leu	Glu	Leu	Thr	Leu	Ser	Asp	Ile	Val	Thr	Ile
	2015					2020					2025			
Leu	Val	Ala	Thr	Thr	Pro	Val	His	Leu	Leu	Asn	Phe	Ala	Arg	Leu
	2030					2035					2040			
Asp	Leu	Ile	Lys	Gln	His	Glu	Tyr	Met	Ala	Arg	Thr	Leu	Arg	Pro
	2045					2050					2055			
Val	Ile	Glu	Ala	Ala	Phe	Arg	Gly	Arg	Leu	Leu	Val	Arg	Ser	Leu
	2060					2065					2070			
Asp	Gly	Asp	Pro	Lys	Gly	Asn	Ala	Arg	Ala	Phe	Phe	Asn	Ala	Ala
	2075					2080					2085			
Pro	Ser	Lys	His	Lys	Leu	Pro	Leu	Ala	Leu	Gly	Ser	Asn	Gln	Asp
	2090					2095					2100			

Pro	Thr	Gly	Gly	Arg	Ile	Phe	Ala	Phe	Arg	Met	Ala	Asp	Trp	Lys
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Leu	Val	Lys	Met	Pro	Gln	Lys	Ile	Thr	Asp	Pro	Phe	Ala	Pro	Trp
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Gln	Leu	Ser	Pro	Pro	Pro	Gly	Val	Lys	Ala	Asn	Val	Asp	Ala	Val
	2135					2140					2145			
Thr	Arg	Ile	Met	Ala	Thr	Asp	Arg	Leu	Ala	Thr	Ile	Thr	Val	Leu
	2150					2155					2160			
Gly	Arg	Met	Cys	Leu	Pro	Pro	Ile	Ser	Leu	Val	Ser	Met	Trp	Asn
	2165					2170					2175			
Thr	Leu	Gln	Pro	Glu	Glu	Phe	Ala	Tyr	Arg	Thr	Gln	Asp	Asp	Val
	2180					2185					2190			
Asp	Ile	Ile	Val	Asp	Ala	Arg	Leu	Asp	Leu	Ser	Ser	Thr	Leu	Asn
	2195					2200					2205			
Ala	Arg	Phe	Asp	Thr	Ala	Pro	Ser	Asn	Thr	Thr	Leu	Glu	Trp	Asn
	2210					2215					2220			
Thr	Asp	Arg	Lys	Val	Ile	Thr	Asp	Ala	Tyr	Ile	Gln	Thr	Gly	Ala
	2225					2230					2235			
Thr	Thr	Val	Phe	Thr	Val	Thr	Gly	Ala	Ala	Pro	Thr	His	Val	Ser
	2240					2245					2250			
Asn	Val	Thr	Ala	Phe	Asp	Ile	Ala	Thr	Thr	Ala	Ile	Leu	Phe	Gly
	2255					2260					2265			
Ala	Pro	Leu	Val	Ile	Ala	Met	Glu	Leu	Thr	Ser	Val	Phe	Ser	Gln
	2270					2275					2280			
Asn	Ser	Gly	Leu	Thr	Leu	Gly	Leu	Lys	Leu	Phe	Asp	Ser	Arg	His
	2285					2290					2295			
Met	Ala	Thr	Asp	Ser	Gly	Ile	Ser	Ser	Ala	Val	Ser	Pro	Asp	Ile
	2300					2305					2310			

Val	Ser	Trp	Gly	Leu	Arg	Leu	Leu	His	Met	Asp	Pro	His	Pro	Ile
	2315					2320					2325			
Glu	Asn	Ala	Cys	Leu	Ile	Val	Gln	Leu	Glu	Lys	Leu	Ser	Ala	Leu
	2330					2335					2340			
Ile	Ala	Asn	Lys	Pro	Leu	Thr	Asn	Asn	Pro	Pro	Cys	Leu	Leu	Leu
	2345					2350					2355			
Leu	Asp	Glu	His	Met	Asn	Pro	Ser	Tyr	Val	Leu	Trp	Glu	Arg	Lys
	2360					2365					2370			
Asp	Ser	Ile	Pro	Ala	Pro	Asp	Tyr	Val	Val	Phe	Trp	Gly	Pro	Glu
	2375					2380					2385			
Ser	Leu	Ile	Asp	Leu	Pro	Tyr	Ile	Asp	Ser	Asp	Glu	Asp	Ser	Phe
	2390					2395					2400			
Pro	Ser	Cys	Pro	Asp	Asp	Pro	Phe	Tyr	Ser	Gln	Ile	Ile	Ala	Gly
	2405					2410					2415			
Tyr	Ala	Pro	Gln	Gly	Pro	Pro	Asn	Leu	Asp	Thr	Thr	Asp	Phe	Tyr
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Pro	Thr	Glu	Pro	Leu	Phe	Lys	Ser	Pro	Val	Gln	Val	Val	Arg	Ser
	2435					2440					2445			
Ser	Lys	Cys	Lys	Lys	Met	Pro	Val	Arg	Pro	Ala	Gln	Pro	Ala	Gln
	2450					2455					2460			
Pro	Ala	Gln	Pro	Ala	Gln	Pro	Ala	Gln	Thr	Val	Gln	Pro	Ala	Gln
	2465					2470					2475			
Pro	Ile	Glu	Pro	Gly	Thr	Gln	Ile	Val	Val	Gln	Asn	Phe	Lys	Lys
	2480					2485					2490			
Pro	Gln	Ser	Val	Lys	Thr	Thr	Leu	Ser	Gln	Lys	Asp	Ile	Pro	Leu
	2495					2500					2505			
Tyr	Val	Glu	Thr	Glu	Ser	Glu	Thr	Ala	Val	Leu	Ile	Pro	Lys	Gln
	2510					2515					2520			
Leu	Thr	Thr	Ser	Ile	Lys	Thr	Thr	Val	Cys	Lys	Ser	Ile	Thr	Pro

2525		2530		2535
Pro Asn Asn Gln Leu Ser Asp	Trp Lys Asn Asn	Pro Gln Gln Asn		
2540	2545	2550		
Gln Thr Leu Asn Gln Ala Phe	Ser Lys Pro Ile Leu	Glu Ile Thr		
2555	2560	2565		
Ser Ile Pro Thr Asp Asp Ser	Ile Ser Tyr Arg Thr	Trp Ile Glu		
2570	2575	2580		
Lys Ser Asn Gln Thr Gln Lys	Arg His Gln Asn Asp	Pro Arg Met		
2585	2590	2595		
Tyr Asn Ser Lys Thr Val Phe	His Pro Val Asn Asn	Gln Leu Pro		
2600	2605	2610		
Ser Trp Val Asp Thr Ala Ala	Asp Ala Pro Gln Thr	Asp Leu Leu		
2615	2620	2625		
Thr Asn Tyr Lys Thr Arg Gln	Pro Ser Pro Asn Phe	Pro Arg Asp		
2630	2635	2640		
Val His Thr Trp Gly Val Ser	Ser Asn Pro Phe Asn	Ser Pro Asn		
2645	2650	2655		
Arg Asp Leu Tyr Gln Ser Asp	Phe Ser Glu Pro Ser	Asp Gly Tyr		
2660	2665	2670		
Ser Ser Glu Ser Glu Asn Ser	Ile Val Leu Ser Leu	Asp Glu His		
2675	2680	2685		
Arg Ser Cys Arg Val Pro Arg	His Val Arg Val Val	Asn Ala Asp		
2690	2695	2700		
Val Val Thr Gly Arg Arg Tyr	Val Arg Gly Thr Ala	Leu Gly Ala		
2705	2710	2715		
Leu Ala Leu Leu Ser Gln Ala	Cys Arg Arg Met Ile	Asp Asn Val		
2720	2725	2730		
Arg Tyr Thr Arg Lys Leu Leu	Met Asp His Thr Glu	Asp Ile Phe		
2735	2740	2745		

Gln Gly Leu Gly Tyr Val Lys Leu Leu Leu Asp Gly Thr Tyr Ile
 2750 2755 2760

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 <211> 585
 <212> PRT
 <213> Varicella zoster

<400> 20

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 1 5 10 15

Val Phe Ser Glu Asn Thr Ser Ser Asn Ser Gly Trp Cys Ser Asp Ala
 20 25 30

Phe Ser Asp Ser Tyr Ile Ala Tyr Asn Pro Ala Leu Leu Leu Lys Asn
 35 40 45

Asp Leu Leu Phe Ser Glu Leu Leu Phe Ala Ser His Leu Ile Asn Val
 50 55 60

Pro Arg Ala Ile Glu Asn Asn Val Thr Tyr Glu Ala Ser Ser Ala Val
 65 70 75 80

Gly Val Asp Asn Glu Met Thr Ser Ser Thr Thr Glu Phe Ile Glu Glu
 85 90 95

Ile Gly Asp Val Leu Ala Leu Asp Arg Ala Cys Leu Val Cys Arg Thr
 100 105 110

Leu Asp Leu Tyr Lys Arg Lys Phe Gly Leu Thr Pro Glu Trp Val Ala
 115 120 125

Asp Tyr Ala Met Leu Cys Met Lys Ser Leu Ala Ser Pro Pro Cys Ala
 130 135 140

Val Val Thr Phe Ser Ala Ala Phe Glu Phe Val Tyr Leu Met Asp Arg
 145 150 155 160

Tyr Tyr Leu Cys Arg Tyr Asn Val Thr Leu Val Gly Ser Phe Ala Arg
 165 170 175

Arg Thr Leu Ser Leu Leu Asp Ile Gln Arg His Phe Phe Leu His Val
 180 185 190

Cys Phe Arg Thr Asp Gly Gly Leu Pro Gly Ile Arg Pro Pro Pro Gly
 195 200 205

Lys Glu Met Ala Asn Lys Val Arg Tyr Ser Asn Tyr Ser Phe Phe Val
 210 215 220

Gln Ala Val Val Arg Ala Ala Leu Leu Ser Ile Ser Thr Ser Arg Leu
 225 230 235 240

Asp Glu Thr Glu Thr Arg Lys Ser Phe Tyr Phe Asn Gln Asp Gly Leu
 245 250 255

Thr Gly Gly Pro Gln Pro Leu Ala Ala Ala Leu Ala Asn Trp Lys Asp
 260 265 270

Cys Ala Arg Met Val Asp Cys Ser Ser Ser Glu His Arg Thr Ser Gly
 275 280 285

Met Ile Thr Cys Ala Glu Arg Ala Leu Lys Glu Asp Ile Glu Phe Glu
 290 295 300

Asp Ile Leu Ile Asp Lys Leu Lys Lys Ser Ser Tyr Val Glu Ala Ala
 305 310 315 320

Trp Gly Tyr Ala Asp Leu Ala Leu Leu Leu Leu Ser Gly Val Ala Thr
 325 330 335

Trp Asn Val Asp Glu Arg Thr Asn Cys Ala Ile Glu Thr Arg Val Gly
 340 345 350

Cys Val Lys Ser Tyr Trp Gln Ala Asn Arg Ile Glu Asn Ser Arg Asp
 355 360 365

Val Pro Lys Gln Phe Ser Lys Phe Thr Ser Glu Asp Ala Cys Pro Glu
 370 375 380

Val Ala Phe Gly Pro Ile Leu Leu Thr Thr Leu Lys Asn Ala Lys Cys
 385 390 395 400

Arg Gly Arg Thr Asn Thr Glu Cys Met Leu Cys Cys Leu Leu Thr Ile

Tyr	Val	Tyr	Ala	Cys	Arg	Val	Glu	Asp	Leu	Asp	Leu	Glu	Glu	Ile	Ser	
			20					25					30			
Phe	Leu	Ala	Ala	Arg	Ser	Thr	Asp	Ser	Asp	Leu	Ala	Leu	Leu	Pro	Leu	
		35					40					45				
Met	Arg	Asn	Leu	Thr	Val	Glu	Lys	Thr	Phe	Thr	Ser	Ser	Leu	Ala	Val	
	50					55					60					
Val	Ser	Gly	Ala	Arg	Thr	Thr	Gly	Leu	Ala	Gly	Ala	Gly	Ile	Thr	Leu	
65					70					75					80	
Lys	Leu	Thr	Thr	Ser	His	Phe	Tyr	Pro	Ser	Val	Phe	Val	Phe	His	Gly	
				85					90					95		
Gly	Lys	His	Val	Leu	Pro	Ser	Ser	Ala	Ala	Pro	Asn	Leu	Thr	Arg	Ala	
			100					105					110			
Cys	Asn	Ala	Ala	Arg	Glu	Arg	Phe	Gly	Phe	Ser	Arg	Cys	Gln	Gly	Pro	
		115					120					125				
Pro	Val	Asp	Gly	Ala	Val	Glu	Thr	Thr	Gly	Ala	Glu	Ile	Cys	Thr	Arg	
	130					135					140					
Leu	Gly	Leu	Glu	Pro	Glu	Asn	Thr	Ile	Leu	Tyr	Leu	Val	Val	Thr	Ala	
145					150					155					160	
Leu	Phe	Lys	Glu	Ala	Val	Phe	Met	Cys	Asn	Val	Phe	Leu	His	Tyr	Gly	
				165				170						175		
Gly	Leu	Asp	Ile	Val	His	Ile	Asn	His	Gly	Asp	Val	Ile	Arg	Ile	Pro	
			180					185					190			
Leu	Phe	Pro	Val	Gln	Leu	Phe	Met	Pro	Asp	Val	Asn	Arg	Leu	Val	Pro	
		195					200					205				
Asp	Pro	Phe	Asn	Thr	His	His	Arg	Ser	Ile	Gly	Glu	Gly	Phe	Val	Tyr	
	210					215					220					
Pro	Thr	Pro	Phe	Tyr	Asn	Thr	Gly	Leu	Cys	His	Leu	Ile	His	Asp	Cys	
225					230					235					240	

Val Ile Ala Pro Met Ala Val Ala Leu Arg Val Arg Asn Val Thr Ala
245 250 255

Val Ala Arg Gly Ala Ala His Leu Ala Phe Asp Glu Asn His Glu Gly
260 265 270

Ala Val Leu Pro Pro Asp Ile Thr Tyr Thr Tyr Phe Gln Ser Ser Ser
275 280 285

Ser Gly Thr Thr Thr Ala Arg Gly Ala Arg Arg Asn Asp Val Asn Ser
290 295 300

Thr Ser Lys Pro Ser Pro Ser Gly Gly Phe Glu Arg Arg Leu Ala Ser
305 310 315 320

Ile Met Ala Ala Asp Thr Ala Leu His Ala Glu Val Ile Phe Asn Thr
325 330 335

Gly Ile Tyr Glu Glu Thr Pro Thr Asp Ile Lys Glu Trp Pro Met Phe
340 345 350

Ile Gly Met Glu Gly Thr Leu Pro Arg Leu Asn Ala Leu Gly Ser Tyr
355 360 365

Thr Ala Arg Val Ala Gly Val Ile Gly Ala Met Val Phe Ser Pro Asn
370 375 380

Ser Ala Leu Tyr Leu Thr Glu Val Glu Asp Ser Gly Met Thr Glu Ala
385 390 395 400

Lys Asp Gly Gly Pro Gly Pro Ser Phe Asn Arg Phe Tyr Gln Phe Ala
405 410 415

Gly Pro His Leu Ala Ala Asn Pro Gln Thr Asp Arg Asp Gly His Val
420 425 430

Leu Ser Ser Gln Ser Thr Gly Ser Ser Asn Thr Glu Phe Ser Val Asp
435 440 445

Tyr Leu Ala Leu Ile Cys Gly Phe Gly Ala Pro Leu Leu Ala Arg Leu
450 455 460

Leu Phe Tyr Leu Glu Arg Cys Asp Ala Gly Ala Phe Thr Gly Gly His

465		470		475		480									
Gly	Asp	Ala	Leu	Lys	Tyr	Val	Thr	Gly	Thr	Phe	Asp	Ser	Glu	Ile	Pro
			485					490						495	
Cys	Ser	Leu	Cys	Glu	Lys	His	Thr	Arg	Pro	Val	Cys	Ala	His	Thr	Thr
		500						505					510		
Val	His	Arg	Leu	Arg	Gln	Arg	Met	Pro	Arg	Phe	Gly	Gln	Ala	Thr	Arg
		515					520					525			
Gln	Pro	Ile	Gly	Val	Phe	Gly	Thr	Met	Asn	Ser	Gln	Tyr	Ser	Asp	Cys
	530					535					540				
Asp	Pro	Leu	Gly	Asn	Tyr	Ala	Pro	Tyr	Leu	Ile	Leu	Arg	Lys	Pro	Gly
545				550					555						560
Asp	Gln	Thr	Glu	Ala	Ala	Lys	Ala	Thr	Met	Gln	Asp	Thr	Tyr	Arg	Ala
			565					570						575	
Thr	Leu	Glu	Arg	Leu	Phe	Ile	Asp	Leu	Glu	Gln	Glu	Arg	Leu	Leu	Asp
		580					585						590		
Arg	Gly	Ala	Pro	Cys	Ser	Ser	Glu	Gly	Leu	Ser	Ser	Val	Ile	Val	Asp
	595						600					605			
His	Pro	Thr	Phe	Arg	Arg	Ile	Leu	Asp	Thr	Leu	Arg	Ala	Arg	Ile	Glu
	610					615				620					
Gln	Thr	Thr	Thr	Gln	Phe	Met	Lys	Val	Leu	Val	Glu	Thr	Arg	Asp	Tyr
625				630					635						640
Lys	Ile	Arg	Glu	Gly	Leu	Ser	Glu	Ala	Thr	His	Ser	Met	Ala	Leu	Thr
			645					650						655	
Phe	Asp	Pro	Tyr	Ser	Gly	Ala	Phe	Cys	Pro	Ile	Thr	Asn	Phe	Leu	Val
		660						665					670		
Lys	Arg	Thr	His	Leu	Ala	Val	Val	Gln	Asp	Leu	Ala	Leu	Ser	Gln	Cys
	675						680				685				
His	Cys	Val	Phe	Tyr	Gly	Gln	Gln	Val	Glu	Gly	Arg	Asn	Phe	Arg	Asn
	690					695				700					

Gln	Phe	Gln	Pro	Val	Leu	Arg	Arg	Arg	Phe	Val	Asp	Leu	Phe	Asn	Gly	705	710	715	720
Gly	Phe	Ile	Ser	Thr	Arg	Ser	Ile	Thr	Val	Thr	Leu	Ser	Glu	Gly	Pro	725	730	735	
Val	Ser	Ala	Pro	Asn	Pro	Thr	Leu	Gly	Gln	Asp	Ala	Pro	Ala	Gly	Arg	740	745	750	
Thr	Phe	Asp	Gly	Asp	Leu	Ala	Arg	Val	Ser	Val	Glu	Val	Ile	Arg	Asp	755	760	765	
Ile	Arg	Val	Lys	Asn	Arg	Val	Val	Phe	Ser	Gly	Asn	Cys	Thr	Asn	Leu	770	775	780	
Ser	Glu	Ala	Ala	Arg	Ala	Arg	Leu	Val	Gly	Leu	Ala	Ser	Ala	Tyr	Gln	785	790	795	800
Arg	Gln	Glu	Lys	Arg	Val	Asp	Met	Leu	His	Gly	Ala	Leu	Gly	Phe	Leu	805	810	815	
Leu	Lys	Gln	Phe	His	Gly	Leu	Leu	Phe	Pro	Arg	Gly	Met	Pro	Pro	Asn	820	825	830	
Ser	Lys	Ser	Pro	Asn	Pro	Gln	Trp	Phe	Trp	Thr	Leu	Leu	Gln	Arg	Asn	835	840	845	
Gln	Met	Pro	Ala	Asp	Lys	Leu	Thr	His	Glu	Glu	Ile	Thr	Thr	Ile	Ala	850	855	860	
Ala	Val	Lys	Arg	Phe	Thr	Glu	Glu	Tyr	Ala	Ala	Ile	Asn	Phe	Ile	Asn	865	870	875	880
Leu	Pro	Pro	Thr	Cys	Ile	Gly	Glu	Leu	Ala	Gln	Phe	Tyr	Met	Ala	Asn	885	890	895	
Leu	Ile	Leu	Lys	Tyr	Cys	Asp	His	Ser	Gln	Tyr	Leu	Ile	Asn	Thr	Leu	900	905	910	
Thr	Ser	Ile	Ile	Thr	Gly	Ala	Arg	Arg	Pro	Arg	Asp	Pro	Ser	Ser	Val	915	920	925	

Leu His Trp Ile Arg Lys Asp Val Thr Ser Ala Ala Asp Ile Glu Thr
 930 935 940

Gln Ala Lys Ala Leu Leu Glu Lys Thr Glu Asn Leu Pro Glu Leu Trp
 945 950 955 960

Thr Thr Ala Phe Thr Ser Thr His Leu Val Arg Ala Ala Met Asn Gln
 965 970 975

Arg Pro Met Val Val Leu Gly Ile Ser Ile Ser Lys Tyr His Gly Ala
 980 985 990

Ala Gly Asn Asn Arg Val Phe Gln Ala Gly Asn Trp Ser Gly Leu Asn
 995 1000 1005

Gly Gly Lys Asn Val Cys Pro Leu Phe Thr Phe Asp Arg Thr Arg
 1010 1015 1020

Arg Phe Ile Ile Ala Cys Pro Arg Gly Gly Phe Ile Cys Pro Val
 1025 1030 1035

Thr Gly Pro Ser Ser Gly Asn Arg Glu Thr Thr Leu Ser Asp Gln
 1040 1045 1050

Val Arg Gly Ile Ile Val Ser Gly Gly Ala Met Val Gln Leu Ala
 1055 1060 1065

Ile Tyr Ala Thr Val Val Arg Ala Val Gly Ala Arg Ala Gln His
 1070 1075 1080

Met Ala Phe Asp Asp Trp Leu Ser Leu Thr Asp Asp Glu Phe Leu
 1085 1090 1095

Ala Arg Asp Leu Glu Glu Leu His Asp Gln Ile Ile Gln Thr Leu
 1100 1105 1110

Glu Thr Pro Trp Thr Val Glu Gly Ala Leu Glu Ala Val Lys Ile
 1115 1120 1125

Leu Asp Glu Lys Thr Thr Ala Gly Asp Gly Glu Thr Pro Thr Asn
 1130 1135 1140

Leu Ala Phe Asn Phe Asp Ser Cys Glu Pro Ser His Asp Thr Thr
 1145 1150 1155

Ser Asn Val Leu Asn Ile Ser Gly Ser Asn Ile Ser Gly Ser Thr
 1160 1165 1170

Val Pro Gly Leu Lys Arg Pro Pro Glu Asp Asp Glu Leu Phe Asp
 1175 1180 1185

Leu Ser Gly Ile Pro Ile Lys His Gly Asn Ile Thr Met Glu Met
 1190 1195 1200

Ile

<210> 22
 <211> 770
 <212> PRT
 <213> Varicella zoster

<400> 22

Met Glu Leu Asp Ile Asn Arg Thr Leu Leu Val Leu Leu Gly Gln Val
 1 5 10 15

Tyr Thr Tyr Ile Phe Gln Val Glu Leu Leu Arg Arg Cys Asp Pro Arg
 20 25 30

Val Ala Cys Arg Phe Leu Tyr Arg Leu Ala Ala Asn Cys Leu Thr Val
 35 40 45

Arg Tyr Leu Leu Lys Leu Phe Leu Arg Gly Phe Asn Thr Gln Leu Lys
 50 55 60

Phe Gly Asn Thr Pro Thr Val Cys Ala Leu His Trp Ala Leu Cys Tyr
 65 70 75 80

Val Lys Gly Glu Gly Glu Arg Leu Phe Glu Leu Leu Gln His Phe Lys
 85 90 95

Thr Arg Phe Val Tyr Gly Glu Thr Lys Asp Ser Asn Cys Ile Lys Asp
 100 105 110

Tyr Phe Val Ser Ala Phe Asn Leu Lys Thr Cys Gln Tyr His His Glu
 115 120 125

Leu Ser Leu Thr Thr Tyr Gly Gly Tyr Val Ser Ser Glu Ile Gln Phe
130 135 140

Leu His Asp Ile Glu Asn Phe Leu Lys Gln Leu Asn Tyr Cys Tyr Ile
145 150 155 160

Ile Thr Ser Ser Arg Glu Ala Leu Asn Thr Leu Glu Thr Val Thr Arg
165 170 175

Phe Met Thr Asp Thr Ile Gly Ser Gly Leu Ile Pro Pro Val Glu Leu
180 185 190

Phe Asp Pro Ala His Pro Cys Ala Ile Cys Phe Glu Glu Leu Cys Ile
195 200 205

Thr Ala Asn Gln Gly Glu Thr Leu His Arg Arg Leu Leu Gly Cys Ile
210 215 220

Cys Asp His Val Thr Lys Gln Val Arg Val Asn Val Asp Val Asp Asp
225 230 235 240

Ile Ile Arg Cys Leu Pro Tyr Ile Pro Asp Val Pro Asp Ile Lys Arg
245 250 255

Gln Ser Ala Val Glu Ala Leu Arg Thr Leu Gln Thr Lys Thr Val Val
260 265 270

Asn Pro Met Gly Ala Lys Asn Asp Thr Phe Asp Gln Thr Tyr Glu Ile
275 280 285

Ala Ser Thr Met Leu Asp Ser Tyr Asn Val Phe Lys Pro Ala Pro Arg
290 295 300

Cys Met Tyr Ala Ile Ser Glu Leu Lys Phe Trp Leu Thr Ser Asn Ser
305 310 315 320

Thr Glu Gly Pro Gln Arg Thr Leu Asp Val Phe Val Asp Asn Leu Asp
325 330 335

Val Leu Asn Glu His Glu Lys His Ala Glu Leu Thr Ala Val Thr Val
340 345 350

Glu Leu Ala Leu Phe Gly Lys Thr Pro Ile His Phe Asp Arg Ala Phe
 355 360 365

Ser Glu Glu Leu Gly Ser Leu Asp Ala Ile Asp Ser Ile Leu Val Gly
 370 375 380

Asn Arg Ser Ser Ser Pro Asp Ser Gln Ile Glu Ala Leu Ile Lys Ala
 385 390 395 400

Cys Tyr Ala His His Leu Ser Ser Pro Leu Met Arg His Ile Ser Asn
 405 410 415

Pro Ser His Asp Asn Glu Ala Ala Leu Arg Gln Leu Leu Glu Arg Val
 420 425 430

Gly Cys Glu Asp Asp Leu Thr Lys Glu Ala Ser Asp Ser Ala Thr Ala
 435 440 445

Ser Glu Cys Asp Leu Asn Asp Asp Ser Ser Ile Thr Phe Ala Val His
 450 455 460

Gly Trp Glu Asn Leu Leu Ser Lys Ala Lys Ile Asp Ala Ala Glu Arg
 465 470 475 480

Lys Arg Val Tyr Leu Glu His Leu Ser Lys Arg Ser Leu Thr Ser Leu
 485 490 495

Gly Arg Cys Ile Arg Glu Gln Arg Gln Glu Leu Glu Lys Thr Leu Arg
 500 505 510

Val Asn Val Tyr Gly Glu Ala Leu Leu Gln Thr Phe Val Ser Met Gln
 515 520 525

Asn Gly Phe Gly Ala Arg Asn Val Phe Leu Ala Lys Val Ser Gln Ala
 530 535 540

Gly Cys Ile Ile Asp Asn Arg Ile Gln Glu Ala Ala Phe Asp Ala His
 545 550 555 560

Arg Phe Ile Arg Asn Thr Leu Val Arg His Thr Val Asp Ala Ala Met
 565 570 575

Leu Pro Ala Leu Thr His Lys Phe Phe Glu Leu Val Asn Gly Pro Leu
580 585 590

Phe Asn His Asp Glu His Arg Phe Ala Gln Pro Pro Asn Thr Ala Leu
595 600 605

Phe Phe Thr Val Glu Asn Val Gly Leu Phe Pro His Leu Lys Glu Glu
610 615 620

Leu Ala Lys Phe Met Gly Gly Val Val Gly Ser Asn Trp Leu Leu Ser
625 630 635 640

Pro Phe Arg Gly Phe Tyr Cys Phe Ser Gly Val Glu Gly Val Thr Phe
645 650 655

Ala Gln Arg Leu Ala Trp Lys Tyr Ile Arg Glu Leu Val Phe Ala Thr
660 665 670

Thr Leu Phe Thr Ser Val Phe His Cys Gly Glu Val Arg Leu Cys Arg
675 680 685

Val Asp Arg Leu Gly Lys Asp Pro Arg Gly Cys Thr Ser Gln Pro Lys
690 695 700

Gly Ile Gly Ser Ser His Gly Pro Leu Asp Gly Ile Tyr Leu Thr Tyr
705 710 715 720

Glu Glu Thr Cys Pro Leu Val Ala Ile Ile Gln Ser Gly Glu Thr Gly
725 730 735

Ile Asp Gln Asn Thr Val Val Ile Tyr Asp Ser Asp Val Phe Ser Leu
740 745 750

Leu Tyr Thr Leu Met Gln Arg Leu Ala Pro Asp Ser Thr Asp Pro Ala
755 760 765

Phe Ser
770

<210> 23
<211> 868
<212> PRT
<213> Varicella zoster

<400> 23

Met Phe Val Thr Ala Val Val Ser Val Ser Pro Ser Ser Phe Tyr Glu
1 5 10 15

Ser Leu Gln Val Glu Pro Thr Gln Ser Glu Asp Ile Thr Arg Ser Ala
20 25 30

His Leu Gly Asp Gly Asp Glu Ile Arg Glu Ala Ile His Lys Ser Gln
35 40 45

Asp Ala Glu Thr Lys Pro Thr Phe Tyr Val Cys Pro Pro Pro Thr Gly
50 55 60

Ser Thr Ile Val Arg Leu Glu Pro Thr Arg Thr Cys Pro Asp Tyr His
65 70 75 80

Leu Gly Lys Asn Phe Thr Glu Gly Ile Ala Val Val Tyr Lys Glu Asn
85 90 95

Ile Ala Ala Tyr Lys Phe Lys Ala Thr Val Tyr Tyr Lys Asp Val Ile
100 105 110

Val Ser Thr Ala Trp Ala Gly Ser Ser Tyr Thr Gln Ile Thr Asn Arg
115 120 125

Tyr Ala Asp Arg Val Pro Ile Pro Val Ser Glu Ile Thr Asp Thr Ile
130 135 140

Asp Lys Phe Gly Lys Cys Ser Ser Lys Ala Thr Tyr Val Arg Asn Asn
145 150 155 160

His Lys Val Glu Ala Phe Asn Glu Asp Lys Asn Pro Gln Asp Met Pro
165 170 175

Leu Ile Ala Ser Lys Tyr Asn Ser Val Gly Ser Lys Ala Trp His Thr
180 185 190

Thr Asn Asp Thr Tyr Met Val Ala Gly Thr Pro Gly Thr Tyr Arg Thr
195 200 205

Gly Thr Ser Val Asn Cys Ile Ile Glu Glu Val Glu Ala Arg Ser Ile
210 215 220

Phe Pro Tyr Asp Ser Phe Gly Leu Ser Thr Gly Asp Ile Ile Tyr Met
 225 230 235 240

Ser Pro Phe Phe Gly Leu Arg Asp Gly Ala Tyr Arg Glu His Ser Asn
 245 250 255

Tyr Ala Met Asp Arg Phe His Gln Phe Glu Gly Tyr Arg Gln Arg Asp
 260 265 270

Leu Asp Thr Arg Ala Leu Leu Glu Pro Ala Ala Arg Asn Phe Leu Val
 275 280 285

Thr Pro His Leu Thr Val Gly Trp Asn Trp Lys Pro Lys Arg Thr Glu
 290 295 300

Val Cys Ser Leu Val Lys Trp Arg Glu Val Glu Asp Val Val Arg Asp
 305 310 315 320

Glu Tyr Ala His Asn Phe Arg Phe Thr Met Lys Thr Leu Ser Thr Thr
 325 330 335

Phe Ile Ser Glu Thr Asn Glu Phe Asn Leu Asn Gln Ile His Leu Ser
 340 345 350

Gln Cys Val Lys Glu Glu Ala Arg Ala Ile Ile Asn Arg Ile Tyr Thr
 355 360 365

Thr Arg Tyr Asn Ser Ser His Val Arg Thr Gly Asp Ile Gln Thr Tyr
 370 375 380

Leu Ala Arg Gly Gly Phe Val Val Val Phe Gln Pro Leu Leu Ser Asn
 385 390 395 400

Ser Leu Ala Arg Leu Tyr Leu Gln Glu Leu Val Arg Glu Asn Thr Asn
 405 410 415

His Ser Pro Gln Lys His Pro Thr Arg Asn Thr Arg Ser Arg Arg Ser
 420 425 430

Val Pro Val Glu Leu Arg Ala Asn Arg Thr Ile Thr Thr Thr Ser Ser
 435 440 445

Val Glu Phe Ala Met Leu Gln Phe Thr Tyr Asp His Ile Gln Glu His
450 455 460

Val Asn Glu Met Leu Ala Arg Ile Ser Ser Ser Trp Cys Gln Leu Gln
465 470 475 480

Asn Arg Glu Arg Ala Leu Trp Ser Gly Leu Phe Pro Ile Asn Pro Ser
485 490 495

Ala Leu Ala Ser Thr Ile Leu Asp Gln Arg Val Lys Ala Arg Ile Leu
500 505 510

Gly Asp Val Ile Ser Val Ser Asn Cys Pro Glu Leu Gly Ser Asp Thr
515 520 525

Arg Ile Ile Leu Gln Asn Ser Met Arg Val Ser Gly Ser Thr Thr Arg
530 535 540

Cys Tyr Ser Arg Pro Leu Ile Ser Ile Val Ser Leu Asn Gly Ser Gly
545 550 555 560

Thr Val Glu Gly Gln Leu Gly Thr Asp Asn Glu Leu Ile Met Ser Arg
565 570 575

Asp Leu Leu Glu Pro Cys Val Ala Asn His Lys Arg Tyr Phe Leu Phe
580 585 590

Gly His His Tyr Val Tyr Tyr Glu Asp Tyr Arg Tyr Val Arg Glu Ile
595 600 605

Ala Val His Asp Val Gly Met Ile Ser Thr Tyr Val Asp Leu Asn Leu
610 615 620

Thr Leu Leu Lys Asp Arg Glu Phe Met Pro Leu Gln Val Tyr Thr Arg
625 630 635 640

Asp Glu Leu Arg Asp Thr Gly Leu Leu Asp Tyr Ser Glu Ile Gln Arg
645 650 655

Arg Asn Gln Met His Ser Leu Arg Phe Tyr Asp Ile Asp Lys Val Val
660 665 670

Gln Tyr Asp Ser Gly Thr Ala Ile Met Gln Gly Met Ala Gln Phe Phe

675		680		685
Gln Gly Leu Gly Thr Ala Gly Gln Ala Val Gly His Val Val Leu Gly				
690		695		700
Ala Thr Gly Ala Leu Leu Ser Thr Val His Gly Phe Thr Thr Phe Leu				
705		710		715 720
Ser Asn Pro Phe Gly Ala Leu Ala Val Gly Leu Leu Val Leu Ala Gly				
		725		730 735
Leu Val Ala Ala Phe Phe Ala Tyr Arg Tyr Val Leu Lys Leu Lys Thr				
		740		745 750
Ser Pro Met Lys Ala Leu Tyr Pro Leu Thr Thr Lys Gly Leu Lys Gln				
		755		760 765
Leu Pro Glu Gly Met Asp Pro Phe Ala Glu Lys Pro Asn Ala Thr Asp				
		770		775 780
Thr Pro Ile Glu Glu Ile Gly Asp Ser Gln Asn Thr Glu Pro Ser Val				
785		790		795 800
Asn Ser Gly Phe Asp Pro Asp Lys Phe Arg Glu Ala Gln Glu Met Ile				
		805		810 815
Lys Tyr Met Thr Leu Val Ser Ala Ala Glu Arg Gln Glu Ser Lys Ala				
		820		825 830
Arg Lys Lys Asn Lys Thr Ser Ala Leu Leu Thr Ser Arg Leu Thr Gly				
		835		840 845
Leu Ala Leu Arg Asn Arg Arg Gly Tyr Ser Arg Val Arg Thr Glu Asn				
		850		855 860
Val Thr Gly Val				
865				

<210> 24
 <211> 143
 <212> PRT
 <213> Varicella zoster

 <400> 24

Met Glu Ser Ser Asn Ile Asn Ala Leu Gln Gln Pro Ser Ser Ile Ala
 1 5 10 15

His His Pro Ser Lys Gln Cys Ala Ser Ser Leu Asn Glu Thr Val Lys
 20 25 30

Asp Ser Pro Pro Ala Ile Tyr Glu Asp Arg Leu Glu His Thr Pro Val
 35 40 45

Gln Leu Pro Arg Asp Gly Thr Pro Arg Asp Val Cys Ser Val Gly Gln
 50 55 60

Leu Thr Cys Arg Ala Cys Ala Thr Lys Pro Phe Arg Leu Asn Arg Asp
 65 70 75 80

Ser Gln Tyr Asp Tyr Leu Asn Thr Cys Pro Gly Gly Arg His Ile Ser
 85 90 95

Leu Ala Leu Glu Ile Ile Thr Gly Arg Trp Val Cys Ile Pro Arg Val
 100 105 110

Phe Pro Asp Thr Pro Glu Glu Lys Trp Met Ala Pro Tyr Ile Ile Pro
 115 120 125

Asp Arg Glu Gln Pro Ser Ser Gly Asp Glu Asp Ser Asp Thr Asp
 130 135 140

<210> 25
 <211> 341
 <212> PRT
 <213> Varicella zoster

<400> 25

Met Ser Thr Asp Lys Thr Asp Val Lys Met Gly Val Leu Arg Ile Tyr
 1 5 10 15

Leu Asp Gly Ala Tyr Gly Ile Gly Lys Thr Thr Ala Ala Glu Glu Phe
 20 25 30

Leu His His Phe Ala Ile Thr Pro Asn Arg Ile Leu Leu Ile Gly Glu
 35 40 45

Pro Leu Ser Tyr Trp Arg Asn Leu Ala Gly Glu Asp Ala Ile Cys Gly

50		55		60												
Ile	Tyr	Gly	Thr	Gln	Thr	Arg	Arg	Leu	Asn	Gly	Asp	Val	Ser	Pro	Glu	
65					70					75					80	
Asp	Ala	Gln	Arg	Leu	Thr	Ala	His	Phe	Gln	Ser	Leu	Phe	Cys	Ser	Pro	
				85					90					95		
His	Ala	Ile	Met	His	Ala	Lys	Ile	Ser	Ala	Leu	Met	Asp	Thr	Ser	Thr	
			100					105					110			
Ser	Asp	Leu	Val	Gln	Val	Asn	Lys	Glu	Pro	Tyr	Lys	Ile	Met	Leu	Ser	
		115					120					125				
Asp	Arg	His	Pro	Ile	Ala	Ser	Thr	Ile	Cys	Phe	Pro	Leu	Ser	Arg	Tyr	
	130					135					140					
Leu	Val	Gly	Asp	Met	Ser	Pro	Ala	Ala	Leu	Pro	Gly	Leu	Leu	Phe	Thr	
145					150					155					160	
Leu	Pro	Ala	Glu	Pro	Pro	Gly	Thr	Asn	Leu	Val	Val	Cys	Thr	Val	Ser	
				165					170					175		
Leu	Pro	Ser	His	Leu	Ser	Arg	Val	Ser	Lys	Arg	Ala	Arg	Pro	Gly	Glu	
			180					185					190			
Thr	Val	Asn	Leu	Pro	Phe	Val	Met	Val	Leu	Arg	Asn	Val	Tyr	Ile	Met	
		195					200					205				
Leu	Ile	Asn	Thr	Ile	Ile	Phe	Leu	Lys	Thr	Asn	Asn	Trp	His	Ala	Gly	
	210					215					220					
Trp	Asn	Thr	Leu	Ser	Phe	Cys	Asn	Asp	Val	Phe	Lys	Gln	Lys	Leu	Gln	
225					230					235					240	
Lys	Ser	Glu	Cys	Ile	Lys	Leu	Arg	Glu	Val	Pro	Gly	Ile	Glu	Asp	Thr	
				245					250					255		
Leu	Phe	Ala	Val	Leu	Lys	Leu	Pro	Glu	Leu	Cys	Gly	Glu	Phe	Gly	Asn	
			260					265					270			
Ile	Leu	Pro	Leu	Trp	Ala	Trp	Gly	Met	Glu	Thr	Leu	Ser	Asn	Cys	Ser	
		275					280					285				

Arg Ser Met Ser Pro Phe Val Leu Ser Leu Glu Gln Thr Pro Gln His
 290 295 300

Ala Ala Gln Glu Leu Lys Thr Leu Leu Pro Gln Met Thr Pro Ala Asn
 305 310 315 320

Met Ser Ser Gly Ala Trp Asn Ile Leu Lys Glu Leu Val Asn Ala Val
 325 330 335

Gln Asp Asn Thr Ser
 340

<210> 26
 <211> 841
 <212> PRT
 <213> Varicella zoster

<400> 26

Met Phe Ala Leu Val Leu Ala Val Val Ile Leu Pro Leu Trp Thr Thr
 1 5 10 15

Ala Asn Lys Ser Tyr Val Thr Pro Thr Pro Ala Thr Arg Ser Ile Gly
 20 25 30

His Met Ser Ala Leu Leu Arg Glu Tyr Ser Asp Arg Asn Met Ser Leu
 35 40 45

Lys Leu Glu Ala Phe Tyr Pro Thr Gly Phe Asp Glu Glu Leu Ile Lys
 50 55 60

Ser Leu His Trp Gly Asn Asp Arg Lys His Val Phe Leu Val Ile Val
 65 70 75 80

Lys Val Asn Pro Thr Thr His Glu Gly Asp Val Gly Leu Val Ile Phe
 85 90 95

Pro Lys Tyr Leu Leu Ser Pro Tyr His Phe Lys Ala Glu His Arg Ala
 100 105 110

Pro Phe Pro Ala Gly Arg Phe Gly Phe Leu Ser His Pro Val Thr Pro
 115 120 125

Asp	Val	Ser	Phe	Phe	Asp	Ser	Ser	Phe	Ala	Pro	Tyr	Leu	Thr	Thr	Gln
130						135					140				
His	Leu	Val	Ala	Phe	Thr	Thr	Phe	Pro	Pro	Asn	Pro	Leu	Val	Trp	His
145					150					155					160
Leu	Glu	Arg	Ala	Glu	Thr	Ala	Ala	Thr	Ala	Glu	Arg	Pro	Phe	Gly	Val
				165					170					175	
Ser	Leu	Leu	Pro	Ala	Arg	Pro	Thr	Val	Pro	Lys	Asn	Thr	Ile	Leu	Glu
			180					185					190		
His	Lys	Ala	His	Phe	Ala	Thr	Trp	Asp	Ala	Leu	Ala	Arg	His	Thr	Phe
	195						200					205			
Phe	Ser	Ala	Glu	Ala	Ile	Ile	Thr	Asn	Ser	Thr	Leu	Arg	Ile	His	Val
210						215					220				
Pro	Leu	Phe	Gly	Ser	Val	Trp	Pro	Ile	Arg	Tyr	Trp	Ala	Thr	Gly	Ser
225					230					235					240
Val	Leu	Leu	Thr	Ser	Asp	Ser	Gly	Arg	Val	Glu	Val	Asn	Ile	Gly	Val
				245					250					255	
Gly	Phe	Met	Ser	Ser	Leu	Ile	Ser	Leu	Ser	Ser	Gly	Pro	Pro	Ile	Glu
			260					265					270		
Leu	Ile	Val	Val	Pro	His	Thr	Val	Lys	Leu	Asn	Ala	Val	Thr	Ser	Asp
	275						280					285			
Thr	Thr	Trp	Phe	Gln	Leu	Asn	Pro	Pro	Gly	Pro	Asp	Pro	Gly	Pro	Ser
	290					295					300				
Tyr	Arg	Val	Tyr	Leu	Leu	Gly	Arg	Gly	Leu	Asp	Met	Asn	Phe	Ser	Lys
305					310					315					320
His	Ala	Thr	Val	Asp	Ile	Cys	Ala	Tyr	Pro	Glu	Glu	Ser	Leu	Asp	Tyr
				325					330					335	
Arg	Tyr	His	Leu	Ser	Met	Ala	His	Thr	Glu	Ala	Leu	Arg	Met	Thr	Thr
			340					345					350		
Lys	Ala	Asp	Gln	His	Asp	Ile	Asn	Glu	Glu	Ser	Tyr	Tyr	His	Ile	Ala

355	360	365															
Ala	Arg	Ile	Ala	Thr	Ser	Ile	Phe	Ala	Leu	Ser	Glu	Met	Gly	Arg	Thr		
370						375					380						
Thr	Glu	Tyr	Phe	Leu	Leu	Asp	Glu	Ile	Val	Asp	Val	Gln	Tyr	Gln	Leu		
385					390					395					400		
Lys	Phe	Leu	Asn	Tyr	Ile	Leu	Met	Arg	Ile	Gly	Ala	Gly	Ala	His	Pro		
			405						410					415			
Asn	Thr	Ile	Ser	Gly	Thr	Ser	Asp	Leu	Ile	Phe	Ala	Asp	Pro	Ser	Gln		
			420					425					430				
Leu	His	Asp	Glu	Leu	Ser	Leu	Leu	Phe	Gly	Gln	Val	Lys	Pro	Ala	Asn		
		435					440					445					
Val	Asp	Tyr	Phe	Ile	Ser	Tyr	Asp	Glu	Ala	Arg	Asp	Gln	Leu	Lys	Thr		
450						455					460						
Ala	Tyr	Ala	Leu	Ser	Arg	Gly	Gln	Asp	His	Val	Asn	Ala	Leu	Ser	Leu		
465					470					475					480		
Ala	Arg	Arg	Val	Ile	Met	Ser	Ile	Tyr	Lys	Gly	Leu	Leu	Val	Lys	Gln		
			485						490					495			
Asn	Leu	Asn	Ala	Thr	Glu	Arg	Gln	Ala	Leu	Phe	Phe	Ala	Ser	Met	Ile		
			500					505					510				
Leu	Leu	Asn	Phe	Arg	Glu	Gly	Leu	Glu	Asn	Ser	Ser	Arg	Val	Leu	Asp		
		515					520					525					
Gly	Arg	Thr	Thr	Leu	Leu	Leu	Met	Thr	Ser	Met	Cys	Thr	Ala	Ala	His		
530						535					540						
Ala	Thr	Gln	Ala	Ala	Leu	Asn	Ile	Gln	Glu	Gly	Leu	Ala	Tyr	Leu	Asn		
545					550					555					560		
Pro	Ser	Lys	His	Met	Phe	Thr	Ile	Pro	Asn	Val	Tyr	Ser	Pro	Cys	Met		
			565						570					575			
Gly	Ser	Leu	Arg	Thr	Asp	Leu	Thr	Glu	Glu	Ile	His	Val	Met	Asn	Leu		
			580					585					590				

Leu Ser Ala Ile Pro Thr Arg Pro Gly Leu Asn Glu Val Leu His Thr
595 600 605

Gln Leu Asp Glu Ser Glu Ile Phe Asp Ala Ala Phe Lys Thr Met Met
610 615 620

Ile Phe Thr Thr Trp Thr Ala Lys Asp Leu His Ile Leu His Thr His
625 630 635 640

Val Pro Glu Val Phe Thr Cys Gln Asp Ala Ala Ala Arg Asn Gly Glu
645 650 655

Tyr Val Leu Ile Leu Pro Ala Val Gln Gly His Ser Tyr Val Ile Thr
660 665 670

Arg Asn Lys Pro Gln Arg Gly Leu Val Tyr Ser Leu Ala Asp Val Asp
675 680 685

Val Tyr Asn Pro Ile Ser Val Val Tyr Leu Ser Arg Asp Thr Cys Val
690 695 700

Ser Glu His Gly Val Ile Glu Thr Val Ala Leu Pro His Pro Asp Asn
705 710 715 720

Leu Lys Glu Cys Leu Tyr Cys Gly Ser Val Phe Leu Arg Tyr Leu Thr
725 730 735

Thr Gly Ala Ile Met Asp Ile Ile Ile Ile Asp Ser Lys Asp Thr Glu
740 745 750

Arg Gln Leu Ala Ala Met Gly Asn Ser Thr Ile Pro Pro Phe Asn Pro
755 760 765

Asp Met His Gly Asp Asp Ser Lys Ala Val Leu Leu Phe Pro Asn Gly
770 775 780

Thr Val Val Thr Leu Leu Gly Phe Glu Arg Arg Gln Ala Ile Arg Met
785 790 795 800

Ser Gly Gln Tyr Leu Gly Ala Ser Leu Gly Gly Ala Phe Leu Ala Val
805 810 815

Val Gly Phe Gly Ile Ile Gly Trp Met Leu Cys Gly Asn Ser Arg Leu
820 825 830

Arg Glu Tyr Asn Lys Ile Pro Leu Thr
835 840

<210> 27
<211> 240
<212> PRT
<213> Varicella zoster

<400> 27

Met Asn Pro Pro Gln Ala Arg Val Ser Glu Gln Thr Lys Asp Leu Leu
1 5 10 15

Ser Val Met Val Asn Gln His Pro Glu Glu Asp Ala Lys Val Cys Lys
20 25 30

Ser Ser Asp Asn Ser Pro Leu Tyr Asn Thr Met Val Met Leu Ser Tyr
35 40 45

Gly Gly Asp Thr Asp Leu Leu Leu Ser Ser Ala Cys Thr Arg Thr Ser
50 55 60

Thr Val Asn Arg Ser Ala Phe Thr Gln His Ser Val Phe Tyr Ile Ile
65 70 75 80

Ser Thr Val Leu Ile Gln Pro Ile Cys Cys Ile Phe Phe Phe Phe Tyr
85 90 95

Tyr Lys Ala Thr Arg Cys Met Leu Leu Phe Thr Ala Gly Leu Leu Leu
100 105 110

Thr Ile Leu His His Phe Arg Leu Ile Ile Met Leu Leu Cys Val Tyr
115 120 125

Arg Asn Ile Arg Ser Asp Leu Leu Pro Leu Ser Thr Ser Gln Gln Leu
130 135 140

Leu Leu Gly Ile Ile Val Val Thr Arg Thr Met Leu Phe Cys Ile Thr
145 150 155 160

Ala Tyr Tyr Thr Leu Phe Ile Asp Thr Arg Val Phe Phe Leu Ile Thr

	165		170		175
Gly His Leu Gln Ser Glu Val Ile Phe Pro Asp Ser Val Ser Lys Ile	180	185	190		
Leu Pro Val Ser Trp Gly Pro Ser Pro Ala Val Leu Leu Val Met Ala	195	200	205		
Ala Val Ile Tyr Ala Met Asp Cys Leu Val Asp Thr Val Ser Phe Ile	210	215	220		
Gly Pro Arg Val Trp Val Arg Val Met Leu Lys Thr Ser Ile Ser Phe	225	230	235	240	
<210> 28					
<211> 1396					
<212> PRT					
<213> Varicella zoster					
<400> 28					
Met Thr Thr Val Ser Cys Pro Ala Asn Val Ile Thr Thr Thr Glu Ser	1	5	10	15	
Asp Arg Ile Ala Gly Leu Phe Asn Ile Pro Ala Gly Ile Ile Pro Thr	20	25	30		
Gly Asn Val Leu Ser Thr Ile Glu Val Cys Ala His Arg Cys Ile Phe	35	40	45		
Asp Phe Phe Lys Gln Ile Arg Ser Asp Asp Asn Ser Leu Tyr Ser Ala	50	55	60		
Gln Phe Asp Ile Leu Leu Gly Thr Tyr Cys Asn Thr Leu Asn Phe Val	65	70	75	80	
Arg Phe Leu Glu Leu Gly Leu Ser Val Ala Cys Ile Cys Thr Lys Phe	85	90	95		
Pro Glu Leu Ala Tyr Val Arg Asp Gly Val Ile Gln Phe Glu Val Gln	100	105	110		
Gln Pro Met Ile Ala Arg Asp Gly Pro His Pro Val Asp Gln Pro Val	115	120	125		

His	Asn	Tyr	Met	Val	Lys	Arg	Ile	His	Lys	Arg	Ser	Leu	Ser	Ala	Ala	
	130					135					140					
Phe	Ala	Ile	Ala	Ser	Glu	Ala	Leu	Ser	Leu	Leu	Ser	Asn	Thr	Tyr	Val	
145					150					155					160	
Asp	Gly	Thr	Glu	Ile	Asp	Ser	Ser	Leu	Arg	Ile	Arg	Ala	Ile	Gln	Gln	
				165					170					175		
Met	Ala	Arg	Asn	Leu	Arg	Thr	Val	Leu	Asp	Ser	Phe	Glu	Arg	Gly	Thr	
			180					185					190			
Ala	Asp	Gln	Leu	Leu	Gly	Val	Leu	Leu	Glu	Lys	Ala	Pro	Pro	Leu	Ser	
		195					200					205				
Leu	Leu	Ser	Pro	Ile	Asn	Lys	Phe	Gln	Pro	Glu	Gly	His	Leu	Asn	Arg	
	210					215					220					
Val	Ala	Arg	Ala	Ala	Leu	Leu	Ser	Asp	Leu	Lys	Arg	Arg	Val	Cys	Ala	
225					230					235					240	
Asp	Met	Phe	Phe	Met	Thr	Arg	His	Ala	Arg	Glu	Pro	Arg	Leu	Ile	Ser	
				245					250					255		
Ala	Tyr	Leu	Ser	Asp	Met	Val	Ser	Cys	Thr	Gln	Pro	Ser	Val	Met	Val	
			260					265					270			
Ser	Arg	Ile	Thr	His	Thr	Asn	Thr	Arg	Gly	Arg	Gln	Val	Asp	Gly	Val	
		275					280					285				
Leu	Val	Thr	Thr	Ala	Thr	Leu	Lys	Arg	Gln	Leu	Leu	Gln	Gly	Ile	Leu	
	290					295					300					
Gln	Ile	Asp	Asp	Thr	Ala	Ala	Asp	Val	Pro	Val	Thr	Tyr	Gly	Glu	Met	
305					310					315					320	
Val	Leu	Gln	Gly	Thr	Asn	Leu	Val	Thr	Ala	Leu	Val	Met	Gly	Lys	Ala	
				325					330					335		
Val	Arg	Gly	Met	Asp	Asp	Val	Ala	Arg	His	Leu	Leu	Asp	Ile	Thr	Asp	
			340					345					350			

Pro Asn Thr Leu Asn Ile Pro Ser Ile Pro Pro Gln Ser Asn Ser Asp
 355 360 365

Ser Thr Thr Ala Gly Leu Pro Val Asn Ala Arg Val Pro Ala Asp Leu
 370 375 380

Val Ile Val Gly Asp Lys Leu Val Phe Leu Glu Ala Leu Glu Arg Arg
 385 390 395 400

Val Tyr Gln Ala Thr Arg Val Ala Tyr Pro Leu Ile Gly Asn Ile Asp
 405 410 415

Ile Thr Phe Ile Met Pro Met Gly Val Phe Gln Ala Asn Ser Met Asp
 420 425 430

Arg Tyr Thr Arg His Ala Gly Asp Phe Ser Thr Val Ser Glu Gln Asp
 435 440 445

Pro Arg Gln Phe Pro Pro Gln Gly Ile Phe Phe Tyr Asn Lys Asp Gly
 450 455 460

Ile Leu Thr Gln Leu Thr Leu Arg Asp Ala Met Gly Thr Ile Cys His
 465 470 475 480

Ser Ser Leu Leu Asp Val Glu Ala Thr Leu Val Ala Leu Arg Gln Gln
 485 490 495

His Leu Asp Arg Gln Cys Tyr Phe Gly Val Tyr Val Ala Glu Gly Thr
 500 505 510

Glu Asp Thr Leu Asp Val Gln Met Gly Arg Phe Met Glu Thr Trp Ala
 515 520 525

Asp Met Met Pro His His Pro His Trp Val Asn Glu His Leu Thr Ile
 530 535 540

Leu Gln Phe Ile Ala Pro Ser Asn Pro Arg Leu Arg Phe Glu Leu Asn
 545 550 555 560

Pro Ala Phe Asp Phe Phe Val Ala Pro Gly Asp Val Asp Leu Pro Gly
 565 570 575

Pro Gln Arg Pro Pro Glu Ala Met Pro Thr Val Asn Ala Thr Leu Arg

580	585	590
Ile Ile Asn Gly Asn Ile Pro Val Pro Leu Cys Pro Ile Ser Phe Arg 595 600 605		
Asp Cys Arg Gly Thr Gln Leu Gly Leu Gly Arg His Thr Met Thr Pro 610 615 620		
Ala Thr Ile Lys Ala Val Lys Asp Thr Phe Glu Asp Arg Ala Tyr Pro 625 630 635 640		
Thr Ile Phe Tyr Met Leu Glu Ala Val Ile His Gly Asn Glu Arg Asn 645 650 655		
Phe Cys Ala Leu Leu Arg Leu Leu Thr Gln Cys Ile Arg Gly Tyr Trp 660 665 670		
Glu Gln Ser His Arg Val Ala Phe Val Asn Asn Phe His Met Leu Met 675 680 685		
Tyr Ile Thr Thr Tyr Leu Gly Asn Gly Glu Leu Pro Glu Val Cys Ile 690 695 700		
Asn Ile Tyr Arg Asp Leu Leu Gln His Val Arg Ala Leu Arg Gln Thr 705 710 715 720		
Ile Thr Asp Phe Thr Ile Gln Gly Glu Gly His Asn Gly Glu Thr Ser 725 730 735		
Glu Ala Leu Asn Asn Ile Leu Thr Asp Asp Thr Phe Ile Ala Pro Ile 740 745 750		
Leu Trp Asp Cys Asp Ala Leu Ile Tyr Arg Asp Glu Ala Ala Arg Asp 755 760 765		
Arg Leu Pro Ala Ile Arg Val Ser Gly Arg Asn Gly Tyr Gln Ala Leu 770 775 780		
His Phe Val Asp Met Ala Gly His Asn Phe Gln Arg Arg Asp Asn Val 785 790 795 800		
Leu Ile His Gly Arg Pro Val Arg Gly Asp Thr Gly Gln Gly Ile Pro 805 810 815		

Ile Thr Pro His His Asp Arg Glu Trp Gly Ile Leu Ser Lys Ile Tyr
820 825 830

Tyr Tyr Ile Val Ile Pro Ala Phe Ser Arg Gly Ser Cys Cys Thr Met
835 840 845

Gly Val Arg Tyr Asp Arg Leu Tyr Pro Ala Leu Gln Ala Val Ile Val
850 855 860

Pro Glu Ile Pro Ala Asp Glu Glu Ala Pro Thr Thr Pro Glu Asp Pro
865 870 875 880

Arg His Pro Leu His Ala His Gln Leu Val Pro Asn Ser Leu Asn Val
885 890 895

Tyr Phe His Asn Ala His Leu Thr Val Asp Gly Asp Ala Leu Leu Thr
900 905 910

Leu Gln Glu Leu Met Gly Asp Met Ala Glu Arg Thr Thr Ala Ile Leu
915 920 925

Val Ser Ser Ala Pro Asp Ala Gly Ala Ala Thr Ala Thr Thr Arg Asn
930 935 940

Met Arg Ile Tyr Asp Gly Ala Leu Tyr His Gly Leu Ile Met Met Ala
945 950 955 960

Tyr Gln Ala Tyr Asp Glu Thr Ile Ala Thr Gly Thr Phe Phe Tyr Pro
965 970 975

Val Pro Val Asn Pro Leu Phe Ala Cys Pro Glu His Leu Ala Ser Leu
980 985 990

Arg Gly Met Thr Asn Ala Arg Arg Val Leu Ala Lys Met Val Pro Pro
995 1000 1005

Ile Pro Pro Phe Leu Gly Ala Asn His His Ala Thr Ile Arg Gln
1010 1015 1020

Pro Val Ala Tyr His Val Thr His Ser Lys Ser Asp Phe Asn Thr
1025 1030 1035

Leu	Thr	Tyr	Ser	Leu	Leu	Gly	Gly	Tyr	Phe	Lys	Phe	Thr	Pro	Ile
1040						1045					1050			
Ser	Leu	Thr	His	Gln	Leu	Arg	Thr	Gly	Phe	His	Pro	Gly	Ile	Ala
1055						1060					1065			
Phe	Thr	Val	Val	Arg	Gln	Asp	Arg	Phe	Ala	Thr	Glu	Gln	Leu	Leu
1070						1075					1080			
Tyr	Ala	Glu	Arg	Ala	Ser	Glu	Ser	Tyr	Phe	Val	Gly	Gln	Ile	Gln
1085						1090					1095			
Val	His	His	His	Asp	Ala	Ile	Gly	Gly	Val	Asn	Phe	Thr	Leu	Thr
1100						1105					1110			
Gln	Pro	Arg	Ala	His	Val	Asp	Leu	Gly	Val	Gly	Tyr	Thr	Ala	Val
1115						1120					1125			
Cys	Ala	Thr	Ala	Ala	Leu	Arg	Cys	Pro	Leu	Thr	Asp	Met	Gly	Asn
1130						1135					1140			
Thr	Ala	Gln	Asn	Leu	Phe	Phe	Ser	Arg	Gly	Gly	Val	Pro	Met	Leu
1145						1150					1155			
His	Asp	Asn	Val	Thr	Glu	Ser	Leu	Arg	Arg	Ile	Thr	Ala	Ser	Gly
1160						1165					1170			
Gly	Arg	Leu	Asn	Pro	Thr	Glu	Pro	Leu	Pro	Ile	Phe	Gly	Gly	Leu
1175						1180					1185			
Arg	Pro	Ala	Thr	Ser	Ala	Gly	Ile	Ala	Arg	Gly	Gln	Ala	Ser	Val
1190						1195					1200			
Cys	Glu	Phe	Val	Ala	Met	Pro	Val	Ser	Thr	Asp	Leu	Gln	Tyr	Phe
1205						1210					1215			
Arg	Thr	Ala	Cys	Asn	Pro	Arg	Gly	Arg	Ala	Ser	Gly	Met	Leu	Tyr
1220						1225					1230			
Met	Gly	Asp	Arg	Asp	Ala	Asp	Ile	Glu	Ala	Ile	Met	Phe	Asp	His
1235						1240					1245			

Thr Gln Ser Asp Val Ala Tyr Thr Asp Arg Ala Thr Leu Asn Pro
 1250 1255 1260

Trp Ala Ser Gln Lys His Ser Tyr Gly Asp Arg Leu Tyr Asn Gly
 1265 1270 1275

Thr Tyr Asn Leu Thr Gly Ala Ser Pro Ile Tyr Ser Pro Cys Phe
 1280 1285 1290

Lys Phe Phe Thr Pro Ala Glu Val Asn Thr Asn Cys Asn Thr Leu
 1295 1300 1305

Asp Arg Leu Leu Met Glu Ala Lys Ala Val Ala Ser Gln Ser Ser
 1310 1315 1320

Thr Asp Thr Glu Tyr Gln Phe Lys Arg Pro Pro Gly Ser Thr Glu
 1325 1330 1335

Met Thr Gln Asp Pro Cys Gly Leu Phe Gln Glu Ala Tyr Pro Pro
 1340 1345 1350

Leu Cys Ser Ser Asp Ala Ala Met Leu Arg Thr Ala His Ala Gly
 1355 1360 1365

Glu Thr Gly Ala Asp Glu Val His Leu Ala Gln Tyr Leu Ile Arg
 1370 1375 1380

Asp Ala Ser Pro Leu Arg Gly Cys Leu Pro Leu Pro Arg
 1385 1390 1395

<210> 29
 <211> 316
 <212> PRT
 <213> Varicella zoster

<400> 29

Met Ala Met Pro Phe Glu Ile Glu Val Leu Leu Pro Gly Glu Leu Ser
 1 5 10 15

Pro Ala Glu Thr Ser Ala Leu Gln Lys Cys Glu Gly Lys Ile Ile Thr
 20 25 30

Phe Ser Thr Leu Arg His Arg Ala Ser Leu Val Asp Ile Ala Leu Ser
 35 40 45

Ser	Tyr	Tyr	Ile	Asn	Gly	Ala	Pro	Pro	Asp	Thr	Leu	Ser	Leu	Leu	Glu
50						55					60				
Ala	Tyr	Arg	Met	Arg	Phe	Ala	Ala	Val	Ile	Thr	Arg	Val	Ile	Pro	Gly
65					70					75					80
Lys	Leu	Leu	Ala	His	Ala	Ile	Gly	Val	Gly	Thr	Pro	Thr	Pro	Gly	Leu
				85					90					95	
Phe	Ile	Gln	Asn	Thr	Ser	Pro	Val	Asp	Leu	Cys	Asn	Gly	Asp	Tyr	Ile
			100					105					110		
Cys	Leu	Leu	Pro	Pro	Val	Phe	Gly	Ser	Ala	Asp	Ser	Ile	Arg	Leu	Asp
		115					120					125			
Ser	Val	Gly	Leu	Glu	Ile	Val	Phe	Pro	Leu	Thr	Ile	Pro	Gln	Thr	Leu
	130					135					140				
Met	Arg	Glu	Ile	Ile	Ala	Lys	Val	Val	Ala	Arg	Ala	Val	Glu	Arg	Thr
145					150					155					160
Ala	Ala	Gly	Ala	Gln	Ile	Leu	Pro	His	Glu	Val	Leu	Arg	Gly	Ala	Asp
				165					170					175	
Val	Ile	Cys	Tyr	Asn	Gly	Arg	Arg	Tyr	Glu	Leu	Glu	Thr	Asn	Leu	Gln
			180					185					190		
His	Arg	Asp	Gly	Ser	Asp	Ala	Ala	Ile	Arg	Thr	Leu	Val	Leu	Asn	Leu
		195					200					205			
Met	Phe	Ser	Ile	Asn	Glu	Gly	Cys	Leu	Leu	Leu	Leu	Ala	Leu	Ile	Pro
	210					215						220			
Thr	Leu	Leu	Val	Gln	Gly	Ala	His	Asp	Gly	Tyr	Val	Asn	Leu	Leu	Ile
225					230					235					240
Gln	Thr	Ala	Asn	Cys	Val	Arg	Glu	Thr	Gly	Gln	Leu	Ile	Asn	Ile	Pro
				245					250					255	
Pro	Met	Pro	Arg	Ile	Gln	Asp	Gly	His	Arg	Arg	Phe	Pro	Ile	Tyr	Glu
			260					265					270		

Thr Ile Ser Ser Trp Ile Ser Thr Ser Ser Arg Leu Gly Asp Thr Leu
275 280 285

Gly Thr Arg Ala Ile Leu Arg Val Cys Val Phe Asp Gly Pro Ser Thr
290 295 300

Val His Pro Gly Asp Arg Thr Ala Val Ile Gln Val
305 310 315

<210> 30
<211> 676
<212> PRT
<213> Varicella zoster

<400> 30

Met Glu Ala His Leu Ala Asn Glu Thr Lys His Ala Leu Trp His Asn
1 5 10 15

Asp His Thr Lys Gly Leu Leu His Val Val Ile Pro Asn Ala Gly Leu
20 25 30

Ile Ala Ala Gly Ile Asp Pro Ala Leu Leu Ile Leu Lys Lys Pro Gly
35 40 45

Gln Arg Phe Lys Val Glu Val Gln Thr Arg Tyr His Ala Thr Gly Gln
50 55 60

Cys Glu Pro Trp Cys Gln Val Phe Ala Ala Tyr Ile Pro Asp Asn Ala
65 70 75 80

Leu Thr Asn Leu Leu Ile Pro Lys Thr Glu Pro Phe Val Ser His Val
85 90 95

Phe Ser Ala Thr His Asn Ser Gly Gly Leu Ile Leu Ser Leu Pro Val
100 105 110

Tyr Leu Ser Pro Gly Leu Phe Phe Asp Ala Phe Asn Val Val Ala Ile
115 120 125

Arg Ile Asn Thr Gly Asn Arg Lys His Arg Asp Ile Cys Ile Met Tyr
130 135 140

Ala Glu Leu Ile Pro Asn Gly Thr Arg Tyr Phe Ala Asp Gly Gln Arg

145					150					155				160	
Val	Leu	Leu	Leu	Cys	Lys	Gln	Leu	Ile	Ala	Tyr	Ile	Arg	Cys	Thr	Pro
				165					170					175	
Arg	Leu	Ala	Ser	Ser	Ile	Lys	Ile	Tyr	Ala	Glu	His	Met	Val	Ala	Ala
			180					185					190		
Met	Gly	Glu	Ser	His	Thr	Ser	Asn	Gly	Asp	Asn	Ile	Gly	Pro	Val	Ser
		195					200					205			
Ser	Ile	Ile	Asp	Leu	Asp	Arg	Gln	Leu	Thr	Ser	Gly	Gly	Ile	Asp	Asp
	210					215					220				
Ser	Pro	Ala	Glu	Thr	Arg	Ile	Gln	Glu	Asn	Asn	Arg	Asp	Val	Leu	Glu
225					230					235					240
Leu	Ile	Lys	Arg	Ala	Val	Asn	Ile	Val	Asn	Ser	Arg	His	Pro	Val	Arg
				245					250					255	
Pro	Ser	Ser	Ser	Arg	Val	Ala	Ser	Gly	Leu	Leu	Gln	Ser	Ala	Lys	Gly
			260					265					270		
His	Gly	Ala	Gln	Thr	Ser	Asn	Thr	Asp	Pro	Ile	Asn	Asn	Gly	Ser	Phe
	275						280					285			
Asp	Gly	Val	Leu	Glu	Pro	Pro	Gly	Gln	Gly	Arg	Phe	Thr	Gly	Lys	Lys
	290					295					300				
Asn	Asn	Ser	Ser	Ala	Ser	Ile	Pro	Pro	Leu	Gln	Asp	Val	Leu	Leu	Phe
305					310					315					320
Thr	Pro	Ala	Ser	Thr	Glu	Pro	Gln	Ser	Leu	Met	Glu	Trp	Phe	Asp	Ile
				325					330					335	
Cys	Tyr	Ala	Gln	Leu	Val	Ser	Gly	Asp	Thr	Pro	Ala	Asp	Phe	Trp	Lys
			340					345					350		
Arg	Arg	Pro	Leu	Ser	Ile	Val	Pro	Arg	His	Tyr	Ala	Glu	Ser	Pro	Ser
		355					360					365			
Pro	Leu	Ile	Val	Val	Ser	Tyr	Asn	Gly	Ser	Ser	Ala	Trp	Gly	Gly	Arg
	370					375					380				

Ile Thr Gly Ser Pro Ile Leu Tyr His Ser Ala Gln Ala Ile Ile Asp
 385 390 395 400

Ala Ala Cys Ile Asn Ala Arg Val Asp Asn Pro Gln Ser Leu His Val
 405 410 415

Thr Ala Arg Gln Glu Leu Val Ala Arg Leu Pro Phe Leu Ala Asn Val
 420 425 430

Leu Asn Asn Gln Thr Pro Leu Pro Ala Phe Lys Pro Gly Ala Glu Met
 435 440 445

Phe Leu Asn Gln Val Phe Lys Gln Ala Cys Val Thr Ser Leu Thr Gln
 450 455 460

Gly Leu Ile Thr Glu Leu Gln Thr Asn Pro Thr Leu Gln Gln Leu Met
 465 470 475 480

Glu Tyr Asp Ile Ala Asp Ser Ser Gln Thr Val Ile Asp Glu Ile Val
 485 490 495

Ala Arg Thr Pro Asp Leu Ile Gln Thr Ile Val Ser Val Leu Thr Glu
 500 505 510

Met Ser Met Asp Ala Phe Tyr Asn Ser Ser Leu Met Tyr Ala Val Leu
 515 520 525

Ala Tyr Leu Ser Ser Val Tyr Thr Arg Pro Gln Gly Gly Gly Tyr Ile
 530 535 540

Pro Tyr Leu His Ala Ser Phe Pro Cys Trp Leu Gly Asn Arg Ser Ile
 545 550 555 560

Tyr Leu Phe Asp Tyr Tyr Asn Ser Gly Gly Glu Ile Leu Lys Leu Ser
 565 570 575

Lys Val Pro Val Pro Val Ala Leu Glu Lys Val Gly Ile Gly Asn Ser
 580 585 590

Thr Gln Leu Arg Gly Lys Phe Ile Arg Ser Ala Asp Ile Val Asp Ile
 595 600 605

Gly Ile Cys Ser Lys Tyr Leu Pro Gly Gln Cys Tyr Ala Tyr Ile Cys
610 615 620

Leu Gly Phe Asn Gln Gln Leu Gln Ser Ile Leu Val Leu Pro Gly Gly
625 630 635 640

Phe Ala Ala Cys Phe Cys Ile Thr Asp Thr Leu Gln Ala Ala Leu Pro
645 650 655

Ala Ser Leu Ile Gly Pro Ile Leu Asp Arg Phe Cys Phe Ser Ile Pro
660 665 670

Asn Pro His Lys
675

<210> 31
<211> 363
<212> PRT
<213> Varicella zoster

<400> 31

Met Glu Leu Gln Arg Ile Phe Pro Leu Tyr Thr Ala Thr Gly Ala Ala
1 5 10 15

Arg Lys Leu Thr Pro Glu Ala Val Gln Arg Leu Cys Asp Ala Leu Thr
20 25 30

Leu Asp Met Gly Leu Trp Lys Ser Ile Leu Thr Asp Pro Arg Val Lys
35 40 45

Ile Met Arg Ser Thr Ala Phe Ile Thr Leu Arg Ile Ala Pro Phe Ile
50 55 60

Pro Leu Gln Thr Asp Thr Thr Asn Ile Ala Val Val Val Ala Thr Ile
65 70 75 80

Tyr Ile Thr Arg Pro Arg Gln Met Asn Leu Pro Pro Lys Thr Phe His
85 90 95

Val Ile Val Asn Phe Asn Tyr Glu Val Ser Tyr Ala Met Thr Ala Thr
100 105 110

Leu Arg Ile Tyr Pro Val Glu Asn Ile Asp His Val Phe Gly Ala Thr

115								120								125
Phe	Lys	Asn	Pro	Ile	Ala	Tyr	Pro	Leu	Pro	Thr	Ser	Ile	Pro	Asp	Pro	
130						135					140					
Arg	Ala	Asp	Pro	Thr	Pro	Ala	Asp	Leu	Thr	Pro	Thr	Pro	Asn	Leu	Ser	
145					150					155					160	
Asn	Tyr	Leu	Gln	Pro	Pro	Arg	Leu	Pro	Lys	Asn	Pro	Tyr	Ala	Cys	Lys	
				165					170					175		
Val	Ile	Ser	Pro	Gly	Val	Trp	Trp	Ser	Asp	Glu	Arg	Arg	Arg	Leu	Tyr	
			180					185						190		
Val	Leu	Ala	Met	Glu	Pro	Asn	Leu	Ile	Gly	Leu	Cys	Pro	Ala	Gly	Trp	
	195						200					205				
His	Ala	Arg	Ile	Leu	Gly	Ser	Val	Leu	Asn	Arg	Leu	Leu	Ser	His	Ala	
210						215					220					
Asp	Gly	Cys	Asp	Glu	Cys	Asn	His	Arg	Val	His	Val	Gly	Ala	Leu	Tyr	
225					230					235					240	
Ala	Leu	Pro	His	Val	Thr	Asn	His	Ala	Glu	Gly	Cys	Val	Cys	Trp	Ala	
				245					250					255		
Pro	Cys	Met	Trp	Arg	Lys	Ala	Gly	Gln	Arg	Glu	Leu	Lys	Val	Glu	Val	
			260					265					270			
Asp	Ile	Gly	Ala	Thr	Gln	Val	Leu	Phe	Val	Asp	Val	Thr	Thr	Cys	Ile	
		275					280					285				
Arg	Ile	Thr	Ser	Thr	Lys	Asn	Pro	Arg	Ile	Thr	Ala	Asn	Leu	Gly	Asp	
	290					295					300					
Val	Ile	Ala	Gly	Thr	Asn	Ala	Ser	Gly	Leu	Ser	Val	Pro	Val	Asn	Ser	
305					310					315					320	
Ser	Gly	Trp	Gln	Leu	Tyr	Met	Phe	Gly	Glu	Thr	Leu	Ser	Arg	Ala	Ile	
			325						330					335		
Ile	Asn	Gly	Cys	Gly	Leu	Leu	Gln	Arg	Ile	Cys	Phe	Pro	Glu	Thr	Gln	
			340					345					350			

Arg Leu Ser Gly Glu Pro Glu Pro Thr Thr Thr
 355 360

<210> 32
 <211> 199
 <212> PRT
 <213> Varicella zoster

<400> 32

Met Ser Gly His Thr Pro Thr Tyr Ala Ser His Arg Arg Asn Arg Val
 1 5 10 15

Lys Leu Val Glu Ala His Asn Arg Ala Gly Leu Phe Lys Glu Arg Thr
 20 25 30

Leu Asp Leu Ile Arg Gly Gly Ala Ser Val Gln Asp Pro Ala Phe Val
 35 40 45

Tyr Ala Phe Thr Ala Ala Lys Glu Ala Cys Ala Asp Leu Asn Asn Gln
 50 55 60

Leu Arg Ser Ala Ala Arg Ile Ala Ser Val Glu Gln Lys Ile Arg Asp
 65 70 75 80

Ile Gln Ser Lys Val Glu Glu Gln Thr Ser Ile Gln Gln Ile Leu Asn
 85 90 95

Thr Asn Arg Arg Tyr Ile Ala Pro Asp Phe Ile Arg Gly Leu Asp Lys
 100 105 110

Thr Glu Asp Asp Asn Thr Asp Asn Ile Asp Arg Leu Glu Asp Ala Val
 115 120 125

Gly Pro Asn Ile Glu His Glu Asn His Thr Trp Phe Gly Glu Asp Asp
 130 135 140

Glu Ala Leu Leu Thr Gln Trp Met Leu Thr Thr His Pro Pro Thr Ser
 145 150 155 160

Lys Tyr Leu Gln Leu Gln Asp Leu Cys Val Pro Thr Thr Ile Pro Thr
 165 170 175

Asp Met Asn Gln Met Gln Pro Gln Pro Ile Ser Lys Asn Glu Asn Pro
180 185 190

Pro Thr Pro His Thr Asp Val
195

<210> 33
<211> 551
<212> PRT
<213> Varicella zoster

<400> 33

Met Ala Arg Ser Gly Leu Asp Arg Ile Asp Ile Ser Pro Gln Pro Ala
1 5 10 15

Lys Lys Ile Ala Arg Val Gly Gly Leu Gln His Pro Phe Val Lys Thr
20 25 30

Asp Ile Asn Thr Ile Asn Val Glu His His Phe Ile Asp Thr Leu Gln
35 40 45

Lys Thr Ser Pro Asn Met Asp Cys Arg Gly Met Thr Ala Gly Ile Phe
50 55 60

Ile Arg Leu Ser His Met Tyr Lys Ile Leu Thr Thr Leu Glu Ser Pro
65 70 75 80

Asn Asp Val Thr Tyr Thr Thr Pro Gly Ser Thr Asn Ala Leu Phe Phe
85 90 95

Lys Thr Ser Thr Gln Pro Gln Glu Pro Arg Pro Glu Glu Leu Ala Ser
100 105 110

Lys Leu Thr Gln Asp Asp Ile Lys Arg Ile Leu Leu Thr Ile Glu Ser
115 120 125

Glu Thr Arg Gly Gln Gly Asp Asn Ala Ile Trp Thr Leu Leu Arg Arg
130 135 140

Asn Leu Ile Thr Ala Ser Thr Leu Lys Trp Ser Val Ser Gly Pro Val
145 150 155 160

Ile Pro Pro Gln Trp Phe Tyr His His Asn Thr Thr Asp Thr Tyr Gly
165 170 175

Asp Ala Ala Ala Met Ala Phe Gly Lys Thr Asn Glu Pro Ala Ala Arg
180 185 190

Ala Ile Val Glu Ala Leu Phe Ile Asp Pro Ala Asp Ile Arg Thr Pro
195 200 205

Asp His Leu Thr Pro Glu Ala Thr Thr Lys Phe Phe Asn Phe Asp Met
210 215 220

Leu Asn Thr Lys Ser Pro Ser Leu Leu Val Gly Thr Pro Arg Ile Gly
225 230 235 240

Thr Tyr Glu Cys Gly Leu Leu Ile Asp Val Arg Thr Gly Leu Ile Gly
245 250 255

Ala Ser Leu Asp Val Leu Val Cys Asp Arg Asp Pro Leu Thr Gly Thr
260 265 270

Leu Asn Pro His Pro Ala Glu Thr Asp Ile Ser Phe Phe Glu Ile Lys
275 280 285

Cys Arg Ala Lys Tyr Leu Phe Asp Pro Asp Asp Lys Asn Asn Pro Leu
290 295 300

Gly Arg Thr Tyr Thr Thr Leu Ile Asn Arg Pro Thr Met Ala Asn Leu
305 310 315 320

Arg Asp Phe Leu Tyr Thr Ile Lys Asn Pro Cys Val Ser Phe Phe Gly
325 330 335

Pro Ser Ala Asn Pro Ser Thr Arg Glu Ala Leu Ile Thr Asp His Val
340 345 350

Glu Trp Lys Arg Leu Gly Phe Lys Gly Gly Arg Ala Leu Thr Glu Leu
355 360 365

Asp Ala His His Leu Gly Leu Asn Arg Thr Ile Ser Ser Arg Val Trp
370 375 380

Val Phe Asn Asp Pro Asp Ile Gln Lys Gly Thr Ile Thr Thr Ile Ala
385 390 395 400

Trp Ala Thr Gly Asp Thr Ala Leu Gln Ile Pro Val Phe Ala Asn Pro
405 410 415

Arg His Ala Asn Phe Lys Gln Ile Ala Val Gln Thr Tyr Val Leu Ser
420 425 430

Gly Tyr Phe Pro Ala Leu Lys Leu Arg Pro Phe Leu Val Thr Phe Ile
435 440 445

Gly Arg Val Arg Arg Pro His Glu Val Gly Val Pro Leu Arg Val Asp
450 455 460

Thr Gln Ala Ala Ala Ile Tyr Glu Tyr Asn Trp Pro Thr Ile Pro Pro
465 470 475 480

His Cys Ala Val Pro Val Ile Ala Val Leu Thr Pro Ile Glu Val Asp
485 490 495

Val Pro Arg Val Thr Gln Ile Leu Lys Asp Thr Gly Asn Asn Ala Ile
500 505 510

Thr Ser Ala Leu Arg Ser Leu Arg Trp Asp Asn Leu His Pro Ala Val
515 520 525

Glu Glu Glu Ser Val Asp Cys Ala Asn Gly Thr Thr Ser Leu Leu Arg
530 535 540

Ala Thr Glu Lys Pro Leu Leu
545 550

<210> 34
<211> 835
<212> PRT
<213> Varicella zoster

<400> 34

Met Ser Pro Asn Thr Gly Glu Ser Asn Ala Ala Val Tyr Ala Ser Ser
1 5 10 15

Thr Gln Leu Ala Arg Ala Leu Tyr Gly Gly Asp Leu Val Ser Trp Ile
20 25 30

Lys His Thr His Pro Gly Ile Ser Leu Glu Leu Gln Leu Asp Val Pro

35	40	45															
Val	Lys	Leu	Ile	Lys	Pro	Gly	Met	Ser	Gln	Thr	Arg	Pro	Val	Thr	Val		
50						55					60						
Val	Arg	Ala	Pro	Met	Gly	Ser	Gly	Lys	Thr	Thr	Ala	Leu	Leu	Glu	Trp		
65					70					75					80		
Leu	Gln	His	Ala	Leu	Lys	Ala	Asp	Ile	Ser	Val	Leu	Val	Val	Ser	Cys		
				85					90					95			
Arg	Arg	Ser	Phe	Thr	Gln	Thr	Leu	Ile	Gln	Arg	Phe	Asn	Asp	Ala	Gly		
			100					105					110				
Leu	Ser	Gly	Phe	Val	Thr	Tyr	Leu	Thr	Ser	Glu	Thr	Tyr	Ile	Met	Gly		
		115					120					125					
Phe	Lys	Arg	Leu	Ile	Val	Gln	Leu	Glu	Ser	Leu	His	Arg	Val	Ser	Ser		
130						135					140						
Glu	Ala	Ile	Asp	Ser	Tyr	Asp	Val	Leu	Ile	Leu	Asp	Glu	Val	Met	Ser		
145					150					155					160		
Val	Ile	Gly	Gln	Leu	Tyr	Ser	Pro	Thr	Met	Arg	Arg	Leu	Ser	Ala	Val		
				165					170					175			
Asp	Ser	Leu	Leu	Tyr	Arg	Leu	Leu	Asn	Arg	Cys	Ser	Gln	Ile	Ile	Ala		
		180						185					190				
Met	Asp	Ala	Thr	Val	Asn	Ser	Gln	Phe	Ile	Asp	Leu	Ile	Ser	Gly	Leu		
	195						200					205					
Arg	Gly	Asp	Glu	Asn	Ile	His	Thr	Ile	Val	Cys	Thr	Tyr	Ala	Gly	Val		
	210					215					220						
Gly	Phe	Ser	Gly	Arg	Thr	Cys	Thr	Ile	Leu	Arg	Asp	Met	Gly	Ile	Asp		
225					230					235					240		
Thr	Leu	Val	Arg	Val	Ile	Lys	Arg	Ser	Pro	Glu	His	Glu	Asp	Val	Arg		
				245					250					255			
Thr	Ile	His	Gln	Leu	Arg	Gly	Thr	Phe	Phe	Asp	Glu	Leu	Ala	Leu	Arg		
			260					265					270				

Leu Gln Cys Gly His Asn Ile Cys Ile Phe Ser Ser Thr Leu Ser Phe
275 280 285

Ser Glu Leu Val Ala Gln Phe Cys Ala Ile Phe Thr Asp Ser Ile Leu
290 295 300

Ile Leu Asn Ser Thr Arg Pro Leu Cys Asn Val Asn Glu Trp Lys His
305 310 315 320

Phe Arg Val Leu Val Tyr Thr Thr Val Val Thr Val Gly Leu Ser Phe
325 330 335

Asp Met Ala His Phe His Ser Met Phe Ala Tyr Ile Lys Pro Met Ser
340 345 350

Tyr Gly Pro Asp Met Val Ser Val Tyr Gln Ser Leu Gly Arg Val Arg
355 360 365

Leu Leu Leu Leu Asn Glu Val Leu Met Tyr Val Asp Gly Ser Arg Thr
370 375 380

Arg Cys Gly Pro Leu Phe Ser Pro Met Leu Leu Asn Phe Thr Ile Ala
385 390 395 400

Asn Lys Phe Gln Trp Phe Pro Thr His Thr Gln Ile Thr Asn Lys Leu
405 410 415

Cys Cys Ala Phe Arg Gln Arg Cys Ala Asn Ala Phe Thr Arg Ser Asn
420 425 430

Thr His Leu Phe Ser Arg Phe Lys Tyr Lys His Leu Phe Glu Arg Cys
435 440 445

Ser Leu Trp Ser Leu Ala Asp Ser Ile Asn Ile Leu Gln Thr Leu Leu
450 455 460

Ala Ser Asn Gln Ile Leu Val Val Leu Asp Gly Met Gly Pro Ile Thr
465 470 475 480

Asp Val Ser Pro Val Gln Phe Cys Ala Phe Ile His Asp Leu Arg His
485 490 495

Ser Ala Asn Ala Val Ala Ser Cys Met Arg Ser Leu Arg Gln Asp Asn
500 505 510

Asp Ser Cys Leu Thr Asp Phe Gly Pro Ser Gly Phe Met Ala Asp Asn
515 520 525

Ile Thr Ala Phe Met Glu Lys Tyr Leu Met Glu Ser Ile Asn Thr Glu
530 535 540

Glu Gln Ile Lys Val Phe Lys Ala Leu Ala Cys Pro Ile Glu Gln Pro
545 550 555 560

Arg Leu Val Asn Thr Ala Ile Leu Gly Ala Cys Ile Arg Ile Pro Glu
565 570 575

Ala Leu Glu Ala Phe Asp Val Phe Gln Lys Ile Tyr Thr His Tyr Ala
580 585 590

Ser Gly Trp Phe Pro Val Leu Asp Lys Thr Gly Glu Phe Ser Ile Ala
595 600 605

Thr Ile Thr Thr Ala Pro Asn Leu Thr Thr His Trp Glu Leu Phe Arg
610 615 620

Arg Cys Ala Tyr Ile Ala Lys Thr Leu Lys Trp Asn Pro Ser Thr Glu
625 630 635 640

Gly Cys Val Thr Gln Val Leu Asp Thr Asp Ile Asn Thr Leu Phe Asn
645 650 655

Gln His Gly Asp Ser Leu Ala Gln Leu Ile Phe Glu Val Met Arg Cys
660 665 670

Asn Val Thr Asp Ala Lys Ile Ile Leu Asn Arg Pro Val Trp Arg Thr
675 680 685

Thr Gly Phe Leu Asp Gly Cys His Asn Gln Cys Phe Arg Pro Ile Pro
690 695 700

Thr Lys His Glu Tyr Asn Ile Ala Leu Phe Arg Leu Ile Trp Glu Gln
705 710 715 720

Leu Phe Gly Ala Arg Val Thr Lys Ser Thr Gln Thr Phe Pro Gly Ser
725 730 735

Thr Arg Val Lys Asn Leu Lys Lys Lys Asp Leu Glu Thr Leu Leu Asp
740 745 750

Ser Ile Asn Val Asp Arg Ser Ala Cys Arg Thr Tyr Arg Gln Leu Tyr
755 760 765

Asn Leu Leu Met Ser Gln Arg His Ser Phe Ser Gln Gln Arg Tyr Lys
770 775 780

Ile Thr Ala Pro Ala Trp Ala Arg His Val Tyr Phe Gln Ala His Gln
785 790 795 800

Met His Leu Ala Pro His Ala Glu Ala Met Leu Gln Leu Ala Leu Ser
805 810 815

Glu Leu Ser Pro Gly Ser Trp Pro Arg Ile Asn Gly Ala Val Asn Phe
820 825 830

Glu Ser Leu
835

<210> 35
<211> 771
<212> PRT
<213> Varicella zoster

<400> 35

Met Asp Ala Thr Gln Ile Thr Leu Val Arg Glu Ser Gly His Ile Cys
1 5 10 15

Ala Ala Ser Ile Tyr Thr Ser Trp Thr Gln Ser Gly Gln Leu Thr Gln
20 25 30

Asn Gly Leu Ser Val Leu Tyr Tyr Leu Leu Cys Lys Asn Ser Cys Gly
35 40 45

Lys Tyr Val Pro Lys Phe Ala Glu Ile Thr Val Gln Gln Glu Asp Leu
50 55 60

Cys Arg Tyr Ser Arg His Gly Gly Ser Val Ser Ala Ala Thr Phe Ala
65 70 75 80

Ser Ile Cys Arg Ala Ala Ser Ser Ala Ala Leu Asp Ala Trp Pro Leu
 85 90 95

Glu Pro Leu Gly Asn Ala Asp Thr Trp Arg Cys Leu His Gly Thr Ala
 100 105 110

Leu Ala Thr Leu Arg Arg Val Leu Gly Phe Lys Ser Phe Tyr Ser Pro
 115 120 125

Val Thr Phe Glu Thr Asp Thr Asn Thr Gly Leu Leu Leu Lys Thr Ile
 130 135 140

Pro Asp Glu His Ala Leu Asn Asn Asp Asn Thr Pro Ser Thr Gly Val
 145 150 155 160

Leu Arg Ala Asn Phe Pro Val Ala Ile Asp Val Ser Ala Val Ser Ala
 165 170 175

Cys Asn Ala His Thr Gln Gly Thr Ser Leu Ala Tyr Ala Arg Leu Thr
 180 185 190

Ala Leu Lys Ser Asn Gly Asp Thr Gln Gln Gln Thr Pro Leu Asp Val
 195 200 205

Glu Val Ile Thr Pro Lys Ala Tyr Ile Arg Arg Lys Tyr Lys Ser Thr
 210 215 220

Phe Ser Pro Pro Ile Glu Arg Glu Gly Gln Thr Ser Asp Leu Phe Asn
 225 230 235 240

Leu Glu Glu Arg Arg Leu Val Leu Ser Gly Asn Arg Ala Ile Val Val
 245 250 255

Arg Val Leu Leu Pro Cys Tyr Phe Asp Cys Leu Thr Thr Asp Ser Thr
 260 265 270

Val Thr Ser Ser Leu Ser Ile Leu Ala Thr Tyr Arg Leu Trp Tyr Ala
 275 280 285

Ala Ala Phe Gly Lys Pro Gly Val Val Arg Pro Ile Phe Ala Tyr Leu
 290 295 300

Gly Pro Glu Leu Asn Pro Lys Gly Glu Asp Arg Asp Tyr Phe Cys Thr
 305 310 315 320

Val Gly Phe Pro Gly Trp Thr Thr Leu Arg Thr Gln Thr Pro Ala Val
 325 330 335

Glu Ser Ile Arg Thr Ala Thr Glu Met Tyr Met Glu Thr Asp Gly Leu
 340 345 350

Trp Pro Val Thr Gly Ile Gln Ala Phe His Tyr Leu Ala Pro Trp Gly
 355 360 365

Gln His Pro Pro Leu Pro Pro Arg Val Gln Asp Leu Ile Gly Gln Ile
 370 375 380

Pro Gln Asp Thr Gly His Ala Asp Ala Thr Val Asn Trp Asp Ala Gly
 385 390 395 400

Arg Ile Ser Thr Val Phe Lys Gln Pro Val Gln Leu Gln Asp Arg Trp
 405 410 415

Met Ala Lys Phe Asp Phe Ser Ala Phe Phe Pro Thr Ile Tyr Cys Ala
 420 425 430

Met Phe Pro Met His Phe Arg Leu Gly Lys Ile Val Leu Ala Arg Met
 435 440 445

Arg Arg Gly Met Gly Cys Leu Lys Pro Ala Leu Val Ser Phe Phe Gly
 450 455 460

Gly Leu Arg His Ile Leu Pro Ser Ile Tyr Lys Ala Ile Ile Phe Ile
 465 470 475 480

Ala Asn Glu Ile Ser Leu Cys Val Glu Gln Thr Ala Leu Glu Gln Gly
 485 490 495

Phe Ala Ile Cys Thr Tyr Ile Lys Asp Gly Phe Trp Gly Ile Phe Thr
 500 505 510

Asp Leu His Thr Arg Asn Val Cys Ser Asp Gln Ala Arg Cys Ser Ala
 515 520 525

Leu Asn Leu Ala Ala Thr Cys Glu Arg Ala Val Thr Gly Leu Leu Arg
 530 535 540

Ile Gln Leu Gly Leu Asn Phe Thr Pro Ala Met Glu Pro Val Leu Arg
 545 550 555 560

Val Glu Gly Val Tyr Thr His Ala Phe Thr Trp Cys Thr Thr Gly Ser
 565 570 575

Trp Leu Trp Asn Leu Gln Thr Asn Thr Pro Pro Asp Leu Val Gly Val
 580 585 590

Pro Trp Arg Ser Gln Ala Ala Arg Asp Leu Lys Glu Arg Leu Ser Gly
 595 600 605

Leu Leu Cys Thr Ala Thr Lys Ile Arg Glu Arg Ile Gln Glu Asn Cys
 610 615 620

Ile Trp Asp His Val Leu Tyr Asp Ile Trp Ala Gly Gln Val Val Glu
 625 630 635 640

Ala Ala Arg Lys Thr Tyr Val Asp Phe Phe Glu His Val Phe Asp Arg
 645 650 655

Arg Tyr Thr Pro Val Tyr Trp Ser Leu Gln Glu Gln Asn Ser Glu Thr
 660 665 670

Lys Ala Ile Pro Ala Ser Tyr Leu Thr Tyr Gly His Met Gln Asp Lys
 675 680 685

Asp Tyr Lys Pro Arg Gln Ile Ile Met Val Arg Asn Pro Asn Pro His
 690 695 700

Gly Pro Pro Thr Val Val Tyr Trp Glu Leu Leu Pro Ser Cys Ala Cys
 705 710 715 720

Ile Pro Pro Ile Asp Cys Ala Ala His Leu Lys Pro Leu Ile His Thr
 725 730 735

Phe Val Thr Ile Ile Asn His Leu Leu Asp Ala His Asn Asp Phe Ser
 740 745 750

Ser Pro Ser Leu Lys Phe Thr Asp Asp Pro Leu Ala Ser Tyr Asn Phe

755 760 765

 Leu Phe Leu
 770

 <210> 36
 <211> 881
 <212> PRT
 <213> Varicella zoster

 <400> 36

 Met Lys Arg Ser Ile Ser Val Asp Ser Ser Ser Pro Lys Asn Val Phe
 1 5 10 15

 Asn Pro Glu Thr Pro Asn Gly Phe Asp Asp Ser Val Tyr Leu Asn Phe
 20 25 30

 Thr Ser Met His Ser Ile Gln Pro Ile Leu Ser Arg Ile Arg Glu Leu
 35 40 45

 Ala Ala Ile Thr Ile Pro Lys Glu Arg Val Pro Arg Leu Cys Trp Phe
 50 55 60

 Lys Gln Leu Leu Glu Leu Gln Ala Pro Pro Glu Met Gln Arg Asn Glu
 65 70 75 80

 Leu Pro Phe Ser Val Tyr Leu Ile Ser Gly Asn Ala Gly Ser Gly Lys
 85 90 95

 Ser Thr Cys Ile Gln Thr Leu Asn Glu Ala Ile Asp Cys Ile Ile Thr
 100 105 110

 Gly Ser Thr Arg Val Ala Ala Gln Asn Val His Ala Lys Leu Ser Thr
 115 120 125

 Ala Tyr Ala Ser Arg Pro Ile Asn Thr Ile Phe His Glu Phe Gly Phe
 130 135 140

 Arg Gly Asn His Ile Gln Ala Gln Leu Gly Arg Tyr Ala Tyr Asn Trp
 145 150 155 160

 Thr Thr Thr Pro Pro Ser Ile Glu Asp Leu Gln Lys Arg Asp Ile Val
 165 170 175

Tyr Tyr Trp Glu Val Leu Ile Asp Ile Thr Lys Arg Val Phe Gln Met
 180 185 190

Gly Asp Asp Gly Arg Gly Gly Thr Ser Thr Phe Lys Thr Leu Trp Ala
 195 200 205

Ile Glu Arg Leu Leu Asn Lys Pro Thr Gly Ser Met Ser Gly Thr Ala
 210 215 220

Phe Ile Ala Cys Gly Ser Leu Pro Ala Phe Thr Arg Ser Asn Val Ile
 225 230 235 240

Val Ile Asp Glu Ala Gly Leu Leu Gly Arg His Ile Leu Thr Ala Val
 245 250 255

Val Tyr Cys Trp Trp Leu Leu Asn Ala Ile Tyr Gln Ser Pro Gln Tyr
 260 265 270

Ile Asn Gly Arg Lys Pro Val Ile Val Cys Val Gly Ser Pro Thr Gln
 275 280 285

Thr Asp Ser Leu Glu Ser His Phe Gln His Asp Met Gln Arg Ser His
 290 295 300

Val Thr Pro Ser Glu Asn Ile Leu Thr Tyr Ile Ile Cys Asn Gln Thr
 305 310 315 320

Leu Arg Gln Tyr Thr Asn Ile Ser His Asn Trp Ala Ile Phe Ile Asn
 325 330 335

Asn Lys Arg Cys Gln Glu Asp Asp Phe Gly Asn Leu Leu Lys Thr Leu
 340 345 350

Glu Tyr Gly Leu Pro Ile Thr Glu Ala His Ala Arg Leu Val Asp Thr
 355 360 365

Phe Val Val Pro Ala Ser Tyr Ile Asn Asn Pro Ala Asn Leu Pro Gly
 370 375 380

Trp Thr Arg Leu Tyr Ser Ser His Lys Glu Val Ser Ala Tyr Met Ser
 385 390 395 400

Lys Leu His Ala His Leu Lys Leu Ser Lys Asn Asp His Phe Ser Val
 405 410 415
 Phe Ala Leu Pro Thr Tyr Thr Phe Ile Arg Leu Thr Ala Phe Asp Glu
 420 425 430
 Tyr Arg Lys Leu Thr Gly Gln Pro Gly Leu Ser Val Glu His Trp Ile
 435 440 445
 Arg Ala Asn Ser Gly Arg Leu His Asn Tyr Ser Gln Ser Arg Asp His
 450 455 460
 Asp Met Gly Thr Val Lys Tyr Glu Thr His Ser Asn Arg Asp Leu Ile
 465 470 475 480
 Val Ala Arg Thr Asp Ile Thr Tyr Val Leu Asn Ser Leu Val Val Val
 485 490 495
 Thr Thr Arg Leu Arg Lys Leu Val Ile Gly Phe Ser Gly Thr Phe Gln
 500 505 510
 Ser Phe Ala Lys Val Leu Arg Asp Asp Ser Phe Val Lys Ala Arg Gly
 515 520 525
 Glu Thr Ser Ile Glu Tyr Ala Tyr Arg Phe Leu Ser Asn Leu Ile Phe
 530 535 540
 Gly Gly Leu Ile Asn Phe Tyr Asn Phe Leu Leu Asn Lys Asn Leu His
 545 550 555 560
 Pro Asp Lys Val Ser Leu Ala Tyr Lys Arg Leu Ala Ala Leu Thr Leu
 565 570 575
 Glu Leu Leu Ser Gly Thr Asn Lys Ala Pro Leu His Glu Ala Ala Val
 580 585 590
 Asn Gly Ala Gly Ala Gly Ile Asp Cys Asp Gly Ala Ala Thr Ser Ala
 595 600 605
 Asp Lys Ala Phe Cys Phe Thr Lys Ala Pro Glu Ser Lys Val Thr Ala
 610 615 620
 Ser Ile Pro Glu Asp Pro Asp Asp Val Ile Phe Thr Ala Leu Asn Asp

625					630						635				640
Glu	Val	Ile	Asp	Leu	Val	Tyr	Cys	Gln	Tyr	Glu	Phe	Ser	Tyr	Pro	Lys
				645					650					655	
Ser	Ser	Asn	Glu	Val	His	Ala	Gln	Phe	Leu	Leu	Met	Lys	Ala	Ile	Tyr
			660					665					670		
Asp	Gly	Arg	Tyr	Ala	Ile	Leu	Ala	Glu	Leu	Phe	Glu	Ser	Ser	Phe	Thr
		675					680					685			
Thr	Ala	Pro	Phe	Ser	Ala	Tyr	Val	Asp	Asn	Val	Asn	Phe	Asn	Gly	Ser
	690					695					700				
Glu	Leu	Leu	Ile	Gly	Asn	Val	Arg	Gly	Gly	Leu	Leu	Ser	Leu	Ala	Leu
705					710					715					720
Gln	Thr	Asp	Thr	Tyr	Thr	Leu	Leu	Gly	Tyr	Thr	Phe	Ala	Pro	Val	Pro
				725					730					735	
Val	Phe	Val	Glu	Glu	Leu	Thr	Arg	Lys	Lys	Leu	Tyr	Arg	Glu	Thr	Thr
			740					745					750		
Glu	Met	Leu	Tyr	Ala	Leu	His	Val	Pro	Leu	Met	Val	Leu	Gln	Asp	Gln
		755					760					765			
His	Gly	Phe	Val	Ser	Ile	Val	Asn	Ala	Asn	Val	Cys	Glu	Phe	Thr	Glu
	770					775					780				
Ser	Ile	Glu	Asp	Ala	Glu	Leu	Ala	Met	Ala	Thr	Thr	Val	Asp	Tyr	Gly
785					790				795						800
Leu	Ser	Ser	Lys	Leu	Ala	Met	Thr	Ile	Ala	Arg	Ser	Gln	Gly	Leu	Ser
				805					810					815	
Leu	Glu	Lys	Val	Ala	Ile	Cys	Phe	Thr	Ala	Asp	Lys	Leu	Arg	Leu	Asn
			820					825					830		
Ser	Val	Tyr	Val	Ala	Met	Ser	Arg	Thr	Val	Ser	Ser	Arg	Phe	Leu	Lys
		835					840					845			
Met	Asn	Leu	Asn	Pro	Leu	Arg	Glu	Arg	Tyr	Glu	Lys	Ser	Ala	Glu	Ile
	850					855					860				

Ser Asp His Ile Leu Ala Ala Leu Arg Asp Pro Asn Val His Val Val
865 870 875 880

Tyr

<210> 37
<211> 278
<212> PRT
<213> Varicella zoster

<400> 37

Met Phe Cys Thr Ser Pro Ala Thr Arg Gly Asp Ser Ser Glu Ser Lys
1 5 10 15

Pro Gly Ala Ser Val Asp Val Asn Gly Lys Met Glu Tyr Gly Ser Ala
20 25 30

Pro Gly Pro Leu Asn Gly Arg Asp Thr Ser Arg Gly Pro Gly Ala Phe
35 40 45

Cys Thr Pro Gly Trp Glu Ile His Pro Ala Arg Leu Val Glu Asp Ile
50 55 60

Asn Arg Val Phe Leu Cys Ile Ala Gln Ser Ser Gly Arg Val Thr Arg
65 70 75 80

Asp Ser Arg Arg Leu Arg Arg Ile Cys Leu Asp Phe Tyr Leu Met Gly
85 90 95

Arg Thr Arg Gln Arg Pro Thr Leu Ala Cys Trp Glu Glu Leu Leu Gln
100 105 110

Leu Gln Pro Thr Gln Thr Gln Cys Leu Arg Ala Thr Leu Met Glu Val
115 120 125

Ser His Arg Pro Pro Arg Gly Glu Asp Gly Phe Ile Glu Ala Pro Asn
130 135 140

Val Pro Leu His Arg Ser Ala Leu Glu Cys Asp Val Ser Asp Asp Gly
145 150 155 160

Gly Glu Asp Asp Ser Asp Asp Asp Gly Ser Thr Pro Ser Asp Val Ile
165 170 175

Glu Phe Arg Asp Ser Asp Ala Glu Ser Ser Asp Gly Glu Asp Phe Ile
180 185 190

Val Glu Glu Glu Ser Glu Glu Ser Thr Asp Ser Cys Glu Pro Asp Gly
195 200 205

Val Pro Gly Asp Cys Tyr Arg Asp Gly Asp Gly Cys Asn Thr Pro Ser
210 215 220

Pro Lys Arg Pro Gln Arg Ala Ile Glu Arg Tyr Ala Gly Ala Glu Thr
225 230 235 240

Ala Glu Tyr Thr Ala Ala Lys Ala Leu Thr Ala Leu Gly Glu Gly Gly
245 250 255

Val Asp Trp Lys Arg Arg Arg His Glu Ala Pro Arg Arg His Asp Ile
260 265 270

Pro Pro Pro His Gly Val
275

<210> 38
<211> 180
<212> PRT
<213> Varicella zoster

<400> 38

Met Asn Leu Cys Gly Ser Arg Gly Glu His Pro Gly Gly Glu Tyr Ala
1 5 10 15

Gly Leu Tyr Cys Thr Arg His Asp Thr Pro Ala His Gln Ala Leu Met
20 25 30

Asn Asp Ala Glu Arg Tyr Phe Ala Ala Ala Leu Cys Ala Ile Ser Thr
35 40 45

Glu Ala Tyr Glu Ala Phe Ile His Ser Pro Ser Glu Arg Pro Cys Ala
50 55 60

Ser Leu Trp Gly Arg Ala Lys Asp Ala Phe Gly Arg Met Cys Gly Glu
65 70 75 80

Leu Ala Ala Asp Arg Gln Arg Pro Pro Ser Val Pro Pro Ile Arg Arg
85 90 95

Ala Val Leu Ser Leu Leu Arg Glu Gln Cys Met Pro Asp Pro Gln Ser
100 105 110

His Leu Glu Leu Ser Glu Arg Leu Ile Leu Met Ala Tyr Trp Cys Cys
115 120 125

Leu Gly His Ala Gly Leu Pro Thr Ile Gly Leu Ser Pro Asp Asn Lys
130 135 140

Cys Ile Arg Ala Glu Leu Tyr Asp Arg Pro Gly Gly Ile Cys His Arg
145 150 155 160

Leu Phe Asp Ala Tyr Leu Gly Cys Gly Ser Leu Gly Val Pro Arg Thr
165 170 175

Tyr Glu Arg Ser
180

<210> 39
<211> 393
<212> PRT
<213> Varicella zoster

<400> 39

Met Asn Asp Val Asp Ala Thr Asp Thr Phe Val Gly Gln Gly Lys Phe
1 5 10 15

Arg Gly Ala Ile Ser Thr Ser Pro Ser His Ile Met Gln Thr Cys Gly
20 25 30

Phe Ile Gln Gln Met Phe Pro Val Glu Met Ser Pro Gly Ile Glu Ser
35 40 45

Glu Asp Asp Pro Asn Tyr Asp Val Asn Met Asp Ile Gln Ser Phe Asn
50 55 60

Ile Phe Asp Gly Val His Glu Thr Glu Ala Glu Ala Ser Val Ala Leu
65 70 75 80

Cys Ala Glu Ala Arg Val Gly Ile Asn Lys Ala Gly Phe Val Ile Leu
 85 90 95

Lys Thr Phe Thr Pro Gly Ala Glu Gly Phe Ala Phe Ala Cys Met Asp
 100 105 110

Ser Lys Thr Cys Glu His Val Val Ile Lys Ala Gly Gln Arg Gln Gly
 115 120 125

Thr Ala Thr Glu Ala Thr Val Leu Arg Ala Leu Thr His Pro Ser Val
 130 135 140

Val Gln Leu Lys Gly Thr Phe Thr Tyr Asn Lys Met Thr Cys Leu Ile
 145 150 155 160

Leu Pro Arg Tyr Arg Thr Asp Leu Tyr Cys Tyr Leu Ala Ala Lys Arg
 165 170 175

Asn Leu Pro Ile Cys Asp Ile Leu Ala Ile Gln Arg Ser Val Leu Arg
 180 185 190

Ala Leu Gln Tyr Leu His Asn Asn Ser Ile Ile His Arg Asp Ile Lys
 195 200 205

Ser Glu Asn Ile Phe Ile Asn His Pro Gly Asp Val Cys Val Gly Asp
 210 215 220

Phe Gly Ala Ala Cys Phe Pro Val Asp Ile Asn Ala Asn Arg Tyr Tyr
 225 230 235 240

Gly Trp Ala Gly Thr Ile Ala Thr Asn Ser Pro Glu Leu Leu Ala Arg
 245 250 255

Asp Pro Tyr Gly Pro Ala Val Asp Ile Trp Ser Ala Gly Ile Val Leu
 260 265 270

Phe Glu Met Ala Thr Gly Gln Asn Ser Leu Phe Glu Arg Asp Gly Leu
 275 280 285

Asp Gly Asn Cys Asp Ser Glu Arg Gln Ile Lys Leu Ile Ile Arg Arg
 290 295 300

Ser Gly Thr His Pro Asn Glu Phe Pro Ile Asn Pro Thr Ser Asn Leu

305 310 315 320
 Arg Arg Gln Tyr Ile Gly Leu Ala Lys Arg Ser Ser Arg Lys Pro Gly
 325 330 335
 Ser Arg Pro Leu Trp Thr Asn Leu Tyr Glu Leu Pro Ile Asp Leu Glu
 340 345 350
 Tyr Leu Ile Cys Lys Met Leu Ser Phe Asp Ala Arg His Arg Pro Ser
 355 360 365
 Ala Glu Val Leu Leu Asn His Ser Val Phe Gln Thr Leu Pro Asp Pro
 370 375 380
 Tyr Pro Asn Pro Met Glu Val Gly Asp
 385 390

 <210> 40
 <211> 354
 <212> PRT
 <213> Varicella zoster

 <400> 40
 Met Phe Leu Ile Gln Cys Leu Ile Ser Ala Val Ile Phe Tyr Ile Gln
 1 5 10 15

 Val Thr Asn Ala Leu Ile Phe Lys Gly Asp His Val Ser Leu Gln Val
 20 25 30

 Asn Ser Ser Leu Thr Ser Ile Leu Ile Pro Met Gln Asn Asp Asn Tyr
 35 40 45

 Thr Glu Ile Lys Gly Gln Leu Val Phe Ile Gly Glu Gln Leu Pro Thr
 50 55 60

 Gly Thr Asn Tyr Ser Gly Thr Leu Glu Leu Leu Tyr Ala Asp Thr Val
 65 70 75 80

 Ala Phe Cys Phe Arg Ser Val Gln Val Ile Arg Tyr Asp Gly Cys Pro
 85 90 95

 Arg Ile Arg Thr Ser Ala Phe Ile Ser Cys Arg Tyr Lys His Ser Trp
 100 105 110

His Tyr Gly Asn Ser Thr Asp Arg Ile Ser Thr Glu Pro Asp Ala Gly
 115 120 125

Val Met Leu Lys Ile Thr Lys Pro Gly Ile Asn Asp Ala Gly Val Tyr
 130 135 140

Val Leu Leu Val Arg Leu Asp His Ser Arg Ser Thr Asp Gly Phe Ile
 145 150 155 160

Leu Gly Val Asn Val Tyr Thr Ala Gly Ser His His Asn Ile His Gly
 165 170 175

Val Ile Tyr Thr Ser Pro Ser Leu Gln Asn Gly Tyr Ser Thr Arg Ala
 180 185 190

Leu Phe Gln Gln Ala Arg Leu Cys Asp Leu Pro Ala Thr Pro Lys Gly
 195 200 205

Ser Gly Thr Ser Leu Phe Gln His Met Leu Asp Leu Arg Ala Gly Lys
 210 215 220

Ser Leu Glu Asp Asn Pro Trp Leu His Glu Asp Val Val Thr Thr Glu
 225 230 235 240

Thr Lys Ser Val Val Lys Glu Gly Ile Glu Asn His Val Tyr Pro Thr
 245 250 255

Asp Met Ser Thr Leu Pro Glu Lys Ser Leu Asn Asp Pro Pro Glu Asn
 260 265 270

Leu Leu Ile Ile Ile Pro Ile Val Ala Ser Val Met Ile Leu Thr Ala
 275 280 285

Met Val Ile Val Ile Val Ile Ser Val Lys Arg Arg Arg Ile Lys Lys
 290 295 300

His Pro Ile Tyr Arg Pro Asn Thr Lys Thr Arg Arg Gly Ile Gln Asn
 305 310 315 320

Ala Thr Pro Glu Ser Asp Val Met Leu Glu Ala Ala Ile Ala Gln Leu
 325 330 335

Ala Thr Ile Arg Glu Glu Ser Pro Pro His Ser Val Val Asn Pro Phe
340 345 350

Val Lys

<210> 41
<211> 623
<212> PRT
<213> Varicella zoster

<400> 41

Met Gly Thr Val Asn Lys Pro Val Val Gly Val Leu Met Gly Phe Gly
1 5 10 15

Ile Ile Thr Gly Thr Leu Arg Ile Thr Asn Pro Val Arg Ala Ser Val
20 25 30

Leu Arg Tyr Asp Asp Phe His Thr Asp Glu Asp Lys Leu Asp Thr Asn
35 40 45

Ser Val Tyr Glu Pro Tyr Tyr His Ser Asp His Ala Glu Ser Ser Trp
50 55 60

Val Asn Arg Gly Glu Ser Ser Arg Lys Ala Tyr Asp His Asn Ser Pro
65 70 75 80

Tyr Ile Trp Pro Arg Asn Asp Tyr Asp Gly Phe Leu Glu Asn Ala His
85 90 95

Glu His His Gly Val Tyr Asn Gln Gly Arg Gly Ile Asp Ser Gly Glu
100 105 110

Arg Leu Met Gln Pro Thr Gln Met Ser Ala Gln Glu Asp Leu Gly Asp
115 120 125

Asp Thr Gly Ile His Val Ile Pro Thr Leu Asn Gly Asp Asp Arg His
130 135 140

Lys Ile Val Asn Val Asp Gln Arg Gln Tyr Gly Asp Val Phe Lys Gly
145 150 155 160

Asp Leu Asn Pro Lys Pro Gln Gly Gln Arg Leu Ile Glu Val Ser Val
165 170 175

Glu Glu Asn His Pro Phe Thr Leu Arg Ala Pro Ile Gln Arg Ile Tyr
180 185 190

Gly Val Arg Tyr Thr Glu Thr Trp Ser Phe Leu Pro Ser Leu Thr Cys
195 200 205

Thr Gly Asp Ala Ala Pro Ala Ile Gln His Ile Cys Leu Lys His Thr
210 215 220

Thr Cys Phe Gln Asp Val Val Val Asp Val Asp Cys Ala Glu Asn Thr
225 230 235 240

Lys Glu Asp Gln Leu Ala Glu Ile Ser Tyr Arg Phe Gln Gly Lys Lys
245 250 255

Glu Ala Asp Gln Pro Trp Ile Val Val Asn Thr Ser Thr Leu Phe Asp
260 265 270

Glu Leu Glu Leu Asp Pro Pro Glu Ile Glu Pro Gly Val Leu Lys Val
275 280 285

Leu Arg Thr Glu Lys Gln Tyr Leu Gly Val Tyr Ile Trp Asn Met Arg
290 295 300

Gly Ser Asp Gly Thr Ser Thr Tyr Ala Thr Phe Leu Val Thr Trp Lys
305 310 315 320

Gly Asp Glu Lys Thr Arg Asn Pro Thr Pro Ala Val Thr Pro Gln Pro
325 330 335

Arg Gly Ala Glu Phe His Met Trp Asn Tyr His Ser His Val Phe Ser
340 345 350

Val Gly Asp Thr Phe Ser Leu Ala Met His Leu Gln Tyr Lys Ile His
355 360 365

Glu Ala Pro Phe Asp Leu Leu Leu Glu Trp Leu Tyr Val Pro Ile Asp
370 375 380

Pro Thr Cys Gln Pro Met Arg Leu Tyr Ser Thr Cys Leu Tyr His Pro
385 390 395 400

Asn	Ala	Pro	Gln	Cys	Leu	Ser	His	Met	Asn	Ser	Gly	Cys	Thr	Phe	Thr	
				405					410					415		
Ser	Pro	His	Leu	Ala	Gln	Arg	Val	Ala	Ser	Thr	Val	Tyr	Gln	Asn	Cys	
			420					425					430			
Glu	His	Ala	Asp	Asn	Tyr	Thr	Ala	Tyr	Cys	Leu	Gly	Ile	Ser	His	Met	
		435					440					445				
Glu	Pro	Ser	Phe	Gly	Leu	Ile	Leu	His	Asp	Gly	Gly	Thr	Thr	Leu	Lys	
	450					455					460					
Phe	Val	Asp	Thr	Pro	Glu	Ser	Leu	Ser	Gly	Leu	Tyr	Val	Phe	Val	Val	
465					470				475						480	
Tyr	Phe	Asn	Gly	His	Val	Glu	Ala	Val	Ala	Tyr	Thr	Val	Val	Ser	Thr	
				485					490					495		
Val	Asp	His	Phe	Val	Asn	Ala	Ile	Glu	Glu	Arg	Gly	Phe	Pro	Pro	Thr	
			500					505					510			
Ala	Gly	Gln	Pro	Pro	Ala	Thr	Thr	Lys	Pro	Lys	Glu	Ile	Thr	Pro	Val	
		515					520					525				
Asn	Pro	Gly	Thr	Ser	Pro	Leu	Leu	Arg	Tyr	Ala	Ala	Trp	Thr	Gly	Gly	
	530					535					540					
Leu	Ala	Ala	Val	Val	Leu	Leu	Cys	Leu	Val	Ile	Phe	Leu	Ile	Cys	Thr	
545					550					555					560	
Ala	Lys	Arg	Met	Arg	Val	Lys	Ala	Tyr	Arg	Val	Asp	Lys	Ser	Pro	Tyr	
				565				570						575		
Asn	Gln	Ser	Met	Tyr	Tyr	Ala	Gly	Leu	Pro	Val	Asp	Asp	Phe	Glu	Asp	
			580					585					590			
Ser	Glu	Ser	Thr	Asp	Thr	Glu	Glu	Glu	Phe	Gly	Asn	Ala	Ile	Gly	Gly	
		595					600					605				
Ser	His	Gly	Gly	Ser	Ser	Tyr	Thr	Val	Tyr	Ile	Asp	Lys	Thr	Arg		
	610					615					620					

<210> 42
 <211> 1310
 <212> PRT
 <213> Varicella zoster

<400> 42

Met Asp Thr Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser
 1 5 10 15

Pro Asp Thr Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala
 20 25 30

Ala Glu His Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu
 35 40 45

Leu Phe Gly Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val
 50 55 60

Ser Ile Pro Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp
 65 70 75 80

Val Gly Glu Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln
 85 90 95

Asp Leu Met Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr
 100 105 110

Arg Phe Ser Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser
 115 120 125

Leu Glu Thr Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro
 130 135 140

Pro Met Asn Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro
 145 150 155 160

Gln Ala Phe Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala
 165 170 175

Gly Asn Asp Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr
 180 185 190

Arg Gly Asn Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln
 195 200 205

Thr Gln Ser Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His
 210 215 220

Ala His Ala Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro
 225 230 235 240

Ala Gln Gly Lys Ser Pro Lys Lys Lys Thr Leu Lys Val Lys Val Pro
 245 250 255

Leu Pro Ala Arg Lys Pro Gly Gly Pro Val Pro Gly Pro Val Glu Gln
 260 265 270

Leu Tyr His Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala
 275 280 285

Asp Leu Pro Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala
 290 295 300

Arg Gly Ile Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro
 305 310 315 320

Arg Ala Phe Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile
 325 330 335

Glu Asp Asp Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val
 340 345 350

Ser Ser Ser Ser Ser Ser Ser Ser Trp Gly Ser Ser Ser Glu Asp Glu
 355 360 365

Asp Asp Glu Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser
 370 375 380

Arg Ser Gly Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser
 385 390 395 400

Asp Ser Asn Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr
 405 410 415

Arg Ser Ile Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu
 420 425 430

Ala Gly Glu Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg
 435 440 445

Ser Arg Thr Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro
 450 455 460

Asp Gly Ser Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val
 465 470 475 480

Arg Phe Gly Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp Glu
 485 490 495

Ala Val Arg Ala Ala Arg Ala Arg Tyr Glu Ala Ser Thr Glu Pro Val
 500 505 510

Pro Leu Tyr Val Pro Glu Leu Gly Asp Pro Ala Arg Gln Tyr Arg Ala
 515 520 525

Leu Ile Asn Leu Ile Tyr Cys Pro Asp Arg Asp Pro Ile Ala Trp Leu
 530 535 540

Gln Asn Pro Lys Leu Thr Gly Val Asn Ser Ala Leu Asn Gln Phe Tyr
 545 550 555 560

Gln Lys Leu Leu Pro Pro Gly Arg Ala Gly Thr Ala Val Thr Gly Ser
 565 570 575

Val Ala Ser Pro Val Pro His Val Gly Glu Ala Met Ala Thr Gly Glu
 580 585 590

Ala Leu Trp Ala Leu Pro His Ala Ala Ala Ala Val Ala Met Ser Arg
 595 600 605

Arg Tyr Asp Arg Ala Gln Lys His Phe Ile Leu Gln Ser Leu Arg Arg
 610 615 620

Ala Phe Ala Ser Met Ala Tyr Pro Glu Ala Thr Gly Ser Ser Pro Ala
 625 630 635 640

Ala Arg Ile Ser Arg Gly His Pro Ser Pro Thr Thr Pro Ala Thr Gln
 645 650 655

Ala Pro Asp Pro Gln Pro Ser Ala Ala Ala Arg Ser Leu Ser Val Cys
 660 665 670

Pro Pro Asp Asp Arg Leu Arg Thr Pro Arg Lys Arg Lys Ser Gln Pro
 675 680 685

Val Glu Ser Arg Ser Leu Leu Asp Lys Ile Arg Glu Thr Pro Val Ala
 690 695 700

Asp Ala Arg Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg
 705 710 715 720

Val Ser Glu Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro Pro
 725 730 735

Ala Val Ile Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly Gly Phe
 740 745 750

Arg Arg Ile Pro Arg Gly Ala Leu His Thr Pro Val Pro Ser Asp Gln
 755 760 765

Ala Arg Lys Ala Tyr Cys Thr Pro Glu Thr Ile Ala Arg Leu Val Asp
 770 775 780

Asp Pro Leu Phe Pro Thr Ala Trp Arg Pro Ala Leu Ser Phe Asp Pro
 785 790 795 800

Gly Ala Leu Ala Glu Ile Ala Ala Arg Arg Pro Gly Gly Gly Asp Arg
 805 810 815

Arg Phe Gly Pro Pro Ser Gly Val Glu Ala Leu Arg Arg Arg Cys Ala
 820 825 830

Trp Met Arg Gln Ile Pro Asp Pro Glu Asp Val Arg Leu Leu Ile Ile
 835 840 845

Tyr Asp Pro Leu Pro Gly Glu Asp Ile Asn Gly Pro Leu Glu Ser Thr
 850 855 860

Leu Ala Thr Asp Pro Gly Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu
 865 870 875 880

Ser Val Val Leu Ala Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr

Pro Gly	Ala Ala Gly	Pro Glu	Ala Gly Asp	Val Pro	Thr Trp Ala
1115		1120		1125	
Arg Val	Phe Cys Arg His	Ala	Leu Leu Glu	Pro Asp	Pro Ala Ala
1130		1135		1140	
Glu Pro	Leu Val Leu Pro	Pro	Val Ala Gly Arg	Ser	Val Ala Leu
1145		1150		1155	
Tyr Ala	Ser Ala Asp Glu	Ala	Arg Asn Ala Leu	Pro	Pro Ile Pro
1160		1165		1170	
Arg Val	Met Trp Pro Pro	Gly	Phe Gly Ala Ala	Glu	Thr Val Leu
1175		1180		1185	
Glu Gly	Ser Asp Gly Thr	Arg	Phe Val Phe Gly	His	His Gly Gly
1190		1195		1200	
Ser Glu	Arg Pro Ser Glu	Thr	Gln Ala Gly Arg	Gln	Arg Arg Thr
1205		1210		1215	
Ala Asp	Asp Arg Glu His	Ala	Leu Glu Leu Asp	Asp	Trp Glu Val
1220		1225		1230	
Gly Cys	Glu Asp Ala Trp	Asp	Ser Glu Glu Gly	Gly	Gly Asp Asp
1235		1240		1245	
Gly Asp	Ala Pro Gly Ser	Ser	Phe Gly Val Ser	Ile	Val Ser Val
1250		1255		1260	
Ala Pro	Gly Val Leu Arg	Asp	Arg Arg Val Gly	Leu	Arg Pro Ala
1265		1270		1275	
Val Lys	Val Glu Leu Leu	Ser	Ser Ser Ser Ser	Ser	Glu Asp Glu
1280		1285		1290	
Asp Asp	Val Trp Gly Gly	Arg	Gly Gly Arg Ser	Pro	Pro Gln Ser
1295		1300		1305	
Arg Gly					
1310					

<210> 43
 <211> 1002
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(1002)

<400> 43
 atg cat tta aag cct acc aga ttt ttc cac gca aac caa ccg cca atg 48
 Met His Leu Lys Pro Thr Arg Phe Phe His Ala Asn Gln Pro Pro Met
 1 5 10 15
 ccg cat tca tac gag atg gag gac tta tgc ttc gac gac atg caa tat 96
 Pro His Ser Tyr Glu Met Glu Asp Leu Cys Phe Asp Asp Met Gln Tyr
 20 25 30
 cgc tgg tct ccc tcg aac aca ccc tat cga agt atg tct agg cga tat 144
 Arg Trp Ser Pro Ser Asn Thr Pro Tyr Arg Ser Met Ser Arg Arg Tyr
 35 40 45
 aaa tcc gta tct cgg agc ggg cct tcg atg cgt gta cgc tcc aga acg 192
 Lys Ser Val Ser Arg Ser Gly Pro Ser Met Arg Val Arg Ser Arg Thr
 50 55 60
 cca tgc cgc cgt caa acc att cga gga aaa ctt atg tca aag gag cgg 240
 Pro Cys Arg Arg Gln Thr Ile Arg Gly Lys Leu Met Ser Lys Glu Arg
 65 70 75 80
 tct gtg tac cgc cat tat ttt aat tac atc gca agg tcc ccc cca gaa 288
 Ser Val Tyr Arg His Tyr Phe Asn Tyr Ile Ala Arg Ser Pro Pro Glu
 85 90 95
 gaa cta gct acc gtt aga ggc tta atc gtg cca att att aag acg acc 336
 Glu Leu Ala Thr Val Arg Gly Leu Ile Val Pro Ile Ile Lys Thr Thr
 100 105 110
 cct gtc acc ctt ccg ttt aac ttg ggt cag aca gtg gcg gat aac tgc 384
 Pro Val Thr Leu Pro Phe Asn Leu Gly Gln Thr Val Ala Asp Asn Cys
 115 120 125
 ctg tcg tta tcc gga atg ggt tat cat tta ggt ctc gga ggt tat tgt 432
 Leu Ser Leu Ser Gly Met Gly Tyr His Leu Gly Leu Gly Gly Tyr Cys
 130 135 140
 ccg aca tgc act gca tct gga gaa ccg cgt cta tgt cga acc gat cgg 480
 Pro Thr Cys Thr Ala Ser Gly Glu Pro Arg Leu Cys Arg Thr Asp Arg
 145 150 155 160
 gcg gct ctg ata cta gca tat gtt cag cag ctt aac aac ata tac gaa 528
 Ala Ala Leu Ile Leu Ala Tyr Val Gln Gln Leu Asn Asn Ile Tyr Glu
 165 170 175
 tat cgt gtg ttt ctt gca tcc att ttg gcg cta tca gac cga gcc aac 576

Tyr	Arg	Val	Phe	Leu	Ala	Ser	Ile	Leu	Ala	Leu	Ser	Asp	Arg	Ala	Asn	
			180					185					190			
atg	caa	gca	gcg	tcc	gct	gaa	ccc	cta	ttg	tcg	agc	gta	ttg	gca	caa	624
Met	Gln	Ala	Ala	Ser	Ala	Glu	Pro	Leu	Leu	Ser	Ser	Val	Leu	Ala	Gln	
		195					200					205				
ccg	gaa	tta	ttt	ttt	atg	tat	cat	att	atg	agg	gag	ggg	ggc	atg	cga	672
Pro	Glu	Leu	Phe	Phe	Met	Tyr	His	Ile	Met	Arg	Glu	Gly	Gly	Met	Arg	
	210					215				220						
gat	ata	cgc	gta	ctt	ttt	tat	cgt	gat	gga	gat	gcc	gga	ggg	ttt	atg	720
Asp	Ile	Arg	Val	Leu	Phe	Tyr	Arg	Asp	Gly	Asp	Ala	Gly	Gly	Phe	Met	
225					230					235					240	
atg	tat	gtt	ata	ttt	ccg	ggg	aaa	tct	gtt	cac	ctc	cat	tac	aga	cta	768
Met	Tyr	Val	Ile	Phe	Pro	Gly	Lys	Ser	Val	His	Leu	His	Tyr	Arg	Leu	
			245						250					255		
atc	gat	cat	ata	cag	gcc	gcg	tgt	cgg	ggg	tat	aaa	ata	gtc	gca	cac	816
Ile	Asp	His	Ile	Gln	Ala	Ala	Cys	Arg	Gly	Tyr	Lys	Ile	Val	Ala	His	
			260					265					270			
gtt	tgg	cag	aca	aca	ttt	tta	ctg	tcg	gta	tgt	cgc	aac	cca	gaa	caa	864
Val	Trp	Gln	Thr	Thr	Phe	Leu	Leu	Ser	Val	Cys	Arg	Asn	Pro	Glu	Gln	
		275					280					285				
caa	aca	gag	act	gtg	gtg	cca	tcc	att	gga	aca	tcg	gac	gtt	tac	tgt	912
Gln	Thr	Glu	Thr	Val	Val	Pro	Ser	Ile	Gly	Thr	Ser	Asp	Val	Tyr	Cys	
	290					295					300					
aaa	atg	tgt	gac	ctt	aac	ttt	gat	gga	gaa	ttg	ctt	ttg	gaa	tac	aaa	960
Lys	Met	Cys	Asp	Leu	Asn	Phe	Asp	Gly	Glu	Leu	Leu	Leu	Glu	Tyr	Lys	
305					310					315					320	
aga	ctc	tac	gca	tta	ttt	gat	gac	ttt	gtt	cct	cct	cgg	tga			1002
Arg	Leu	Tyr	Ala	Leu	Phe	Asp	Asp	Phe	Val	Pro	Pro	Arg				
				325					330							
<210>	44															
<211>	333															
<212>	PRT															
<213>	Varicella zoster															
<400>	44															
Met	His	Leu	Lys	Pro	Thr	Arg	Phe	Phe	His	Ala	Asn	Gln	Pro	Pro	Met	
1				5					10					15		
Pro	His	Ser	Tyr	Glu	Met	Glu	Asp	Leu	Cys	Phe	Asp	Asp	Met	Gln	Tyr	
			20					25					30			
Arg	Trp	Ser	Pro	Ser	Asn	Thr	Pro	Tyr	Arg	Ser	Met	Ser	Arg	Arg	Tyr	
		35					40					45				

Lys Ser Val Ser Arg Ser Gly Pro Ser Met Arg Val Arg Ser Arg Thr
 50 55 60

Pro Cys Arg Arg Gln Thr Ile Arg Gly Lys Leu Met Ser Lys Glu Arg
 65 70 75 80

Ser Val Tyr Arg His Tyr Phe Asn Tyr Ile Ala Arg Ser Pro Pro Glu
 85 90 95

Glu Leu Ala Thr Val Arg Gly Leu Ile Val Pro Ile Ile Lys Thr Thr
 100 105 110

Pro Val Thr Leu Pro Phe Asn Leu Gly Gln Thr Val Ala Asp Asn Cys
 115 120 125

Leu Ser Leu Ser Gly Met Gly Tyr His Leu Gly Leu Gly Gly Tyr Cys
 130 135 140

Pro Thr Cys Thr Ala Ser Gly Glu Pro Arg Leu Cys Arg Thr Asp Arg
 145 150 155 160

Ala Ala Leu Ile Leu Ala Tyr Val Gln Gln Leu Asn Asn Ile Tyr Glu
 165 170 175

Tyr Arg Val Phe Leu Ala Ser Ile Leu Ala Leu Ser Asp Arg Ala Asn
 180 185 190

Met Gln Ala Ala Ser Ala Glu Pro Leu Leu Ser Ser Val Leu Ala Gln
 195 200 205

Pro Glu Leu Phe Phe Met Tyr His Ile Met Arg Glu Gly Gly Met Arg
 210 215 220

Asp Ile Arg Val Leu Phe Tyr Arg Asp Gly Asp Ala Gly Gly Phe Met
 225 230 235 240

Met Tyr Val Ile Phe Pro Gly Lys Ser Val His Leu His Tyr Arg Leu
 245 250 255

Ile Asp His Ile Gln Ala Ala Cys Arg Gly Tyr Lys Ile Val Ala His
 260 265 270

Val Trp Gln Thr Thr Phe Leu Leu Ser Val Cys Arg Asn Pro Glu Gln
 275 280 285

Gln Thr Glu Thr Val Val Pro Ser Ile Gly Thr Ser Asp Val Tyr Cys
 290 295 300

Lys Met Cys Asp Leu Asn Phe Asp Gly Glu Leu Leu Leu Glu Tyr Lys
 305 310 315 320

Arg Leu Tyr Ala Leu Phe Asp Asp Phe Val Pro Pro Arg
 325 330

<210> 45
 <211> 1533
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(1533)

<400> 45
 atg gat gct gac gac aca ccc ccc aac ctc caa ata tct cca act gca 48
 Met Asp Ala Asp Asp Thr Pro Pro Asn Leu Gln Ile Ser Pro Thr Ala
 1 5 10 15
 gga cct ttg cgt tcc cac cac aat acc gac gga cat gaa cca aat gca 96
 Gly Pro Leu Arg Ser His His Asn Thr Asp Gly His Glu Pro Asn Ala
 20 25 30
 acc gca gcc gat cag caa gaa cga gaa tcc acc aac ccc aca cac gga 144
 Thr Ala Ala Asp Gln Gln Glu Arg Glu Ser Thr Asn Pro Thr His Gly
 35 40 45
 tgt gta aat cat cca tgg gcc aat ccg tca act gca aca tgc atg gaa 192
 Cys Val Asn His Pro Trp Ala Asn Pro Ser Thr Ala Thr Cys Met Glu
 50 55 60
 tca cca gaa cga tca caa cag aca agc tta ttt tta tta aag cac ggc 240
 Ser Pro Glu Arg Ser Gln Gln Thr Ser Leu Phe Leu Leu Lys His Gly
 65 70 75 80
 tta acg aga gat cca ata cat caa cgc gaa agg gtg gac gtt ttt cca 288
 Leu Thr Arg Asp Pro Ile His Gln Arg Glu Arg Val Asp Val Phe Pro
 85 90 95
 caa ttt aac aaa ccc cca tgg gtt ttt aga att tcc aaa tta tcc cgt 336
 Gln Phe Asn Lys Pro Pro Trp Val Phe Arg Ile Ser Lys Leu Ser Arg
 100 105 110
 tta att gta ccc atc ttc acg ctc aat gaa cag tta tgt ttt tct aaa 384

Leu	Ile	Val	Pro	Ile	Phe	Thr	Leu	Asn	Glu	Gln	Leu	Cys	Phe	Ser	Lys	
		115					120					125				
tta	cag	att	cga	gat	aga	ccc	agg	ttt	gcg	gga	cgg	gga	acg	tat	ggg	432
Leu	Gln	Ile	Arg	Asp	Arg	Pro	Arg	Phe	Ala	Gly	Arg	Gly	Thr	Tyr	Gly	
		130					135					140				
cgt	gtt	cat	ata	tac	cca	tcg	tca	aaa	ata	gct	gta	aaa	acc	atg	gac	480
Arg	Val	His	Ile	Tyr	Pro	Ser	Ser	Lys	Ile	Ala	Val	Lys	Thr	Met	Asp	
145						150					155				160	
agt	cgt	gtt	ttt	aat	aga	gag	tta	att	aac	gcg	att	tta	gcg	agt	gag	528
Ser	Arg	Val	Phe	Asn	Arg	Glu	Leu	Ile	Asn	Ala	Ile	Leu	Ala	Ser	Glu	
				165						170					175	
ggc	tct	ata	cga	gca	ggg	gaa	agg	cta	ggc	att	tct	agc	ata	gtt	tgc	576
Gly	Ser	Ile	Arg	Ala	Gly	Glu	Arg	Leu	Gly	Ile	Ser	Ser	Ile	Val	Cys	
			180						185					190		
ctt	tta	ggc	ttt	tcg	tta	caa	acc	aaa	cag	cta	ctg	ttt	ccg	gca	tac	624
Leu	Leu	Gly	Phe	Ser	Leu	Gln	Thr	Lys	Gln	Leu	Leu	Phe	Pro	Ala	Tyr	
		195					200					205				
gac	atg	gat	atg	gat	gaa	tac	att	gtt	cgc	ctg	tcc	aga	cgg	ttg	aca	672
Asp	Met	Asp	Met	Asp	Glu	Tyr	Ile	Val	Arg	Leu	Ser	Arg	Arg	Leu	Thr	
	210					215					220					
ata	cct	gat	cac	ata	gac	aga	aaa	att	gcc	cat	gta	ttt	tta	gat	ttg	720
Ile	Pro	Asp	His	Ile	Asp	Arg	Lys	Ile	Ala	His	Val	Phe	Leu	Asp	Leu	
225					230					235					240	
gct	caa	gcg	ttg	acg	ttt	tta	aat	cga	acg	tgc	ggc	ctg	acc	cac	cta	768
Ala	Gln	Ala	Leu	Thr	Phe	Leu	Asn	Arg	Thr	Cys	Gly	Leu	Thr	His	Leu	
				245						250				255		
gat	gtg	aaa	tgt	ggc	aat	att	ttt	ctt	aac	gtc	gac	aac	ttt	gcc	tcg	816
Asp	Val	Lys	Cys	Gly	Asn	Ile	Phe	Leu	Asn	Val	Asp	Asn	Phe	Ala	Ser	
			260					265					270			
ttg	gaa	ata	acc	aca	gca	gta	atc	gga	gac	tat	agc	cta	gta	aca	tta	864
Leu	Glu	Ile	Thr	Thr	Ala	Val	Ile	Gly	Asp	Tyr	Ser	Leu	Val	Thr	Leu	
		275					280					285				
aat	acg	tat	tcc	ctt	tgt	act	cga	gcg	ata	ttt	gaa	gtt	gga	aat	cca	912
Asn	Thr	Tyr	Ser	Leu	Cys	Thr	Arg	Ala	Ile	Phe	Glu	Val	Gly	Asn	Pro	
	290					295					300					
tcc	cac	ccg	gag	cac	gta	cta	cgc	gta	ccc	cgg	gat	gca	tcg	cag	atg	960
Ser	His	Pro	Glu	His	Val	Leu	Arg	Val	Pro	Arg	Asp	Ala	Ser	Gln	Met	
305					310					315					320	
tca	ttt	cgt	ttg	gtg	ttg	agt	cat	gga	aca	aac	caa	ccc	cct	gaa	atc	1008
Ser	Phe	Arg	Leu	Val	Leu	Ser	His	Gly	Thr	Asn	Gln	Pro	Pro	Glu	Ile	
				325					330					335		
ttg	ctt	gat	tat	att	aat	gga	acg	ggc	ctt	act	aaa	tat	act	gga	acc	1056
Leu	Leu	Asp	Tyr	Ile	Asn	Gly	Thr	Gly	Leu	Thr	Lys	Tyr	Thr	Gly	Thr	

340	345	350	
ttg ccc caa aga gtt gga ctt gcg att gat ctt tat gca ttg ggc caa			1104
Leu Pro Gln Arg Val Gly Leu Ala Ile Asp Leu Tyr Ala Leu Gly Gln			
355	360	365	
gca ctc tta gaa gtt atc ctg cta gga cgt ctt ccc gga caa ctg ccc			1152
Ala Leu Leu Glu Val Ile Leu Leu Gly Arg Leu Pro Gly Gln Leu Pro			
370	375	380	
att tca gta cat cgg acc ccg cat tat cac tac tac ggt cat aag tta			1200
Ile Ser Val His Arg Thr Pro His Tyr His Tyr Tyr Gly His Lys Leu			
385	390	395	400
tca cca gat ttg gcg ctt gat acg ctg gca tat cga tgt gtc ctg gcg			1248
Ser Pro Asp Leu Ala Leu Asp Thr Leu Ala Tyr Arg Cys Val Leu Ala			
405	410	415	
cca tat ata ctc cca tct gac atc ccc ggg gac tta aat tat aat ccc			1296
Pro Tyr Ile Leu Pro Ser Asp Ile Pro Gly Asp Leu Asn Tyr Asn Pro			
420	425	430	
ttt ata cac gcc gga gag ctg aac acc cgt att tcc cgg aat tct tta			1344
Phe Ile His Ala Gly Glu Leu Asn Thr Arg Ile Ser Arg Asn Ser Leu			
435	440	445	
cgc cgg ata ttc cag tgt cac gca gtg cgt tac ggc gta acg cac tca			1392
Arg Arg Ile Phe Gln Cys His Ala Val Arg Tyr Gly Val Thr His Ser			
450	455	460	
aag ctt ttc gaa ggc ata cgc att ccg gcc tca tta tac cca gcc act			1440
Lys Leu Phe Glu Gly Ile Arg Ile Pro Ala Ser Leu Tyr Pro Ala Thr			
465	470	475	480
gtt gtt aca tcg ttg ttg tgt cac gat aat tca gaa ata cgc tcg gat			1488
Val Val Thr Ser Leu Leu Cys His Asp Asn Ser Glu Ile Arg Ser Asp			
485	490	495	
cac cct tta tta tgg cac gat cgg gat tgg ata gga tcg aca taa			1533
His Pro Leu Leu Trp His Asp Arg Asp Trp Ile Gly Ser Thr			
500	505	510	

<210> 46
 <211> 510
 <212> PRT
 <213> Varicella zoster

<400> 46

Met	Asp	Ala	Asp	Asp	Thr	Pro	Pro	Asn	Leu	Gln	Ile	Ser	Pro	Thr	Ala
1				5					10					15	

Gly	Pro	Leu	Arg	Ser	His	His	Asn	Thr	Asp	Gly	His	Glu	Pro	Asn	Ala
			20					25					30		

Thr	Ala	Ala	Asp	Gln	Gln	Glu	Arg	Glu	Ser	Thr	Asn	Pro	Thr	His	Gly	
		35					40					45				
Cys	Val	Asn	His	Pro	Trp	Ala	Asn	Pro	Ser	Thr	Ala	Thr	Cys	Met	Glu	
	50					55					60					
Ser	Pro	Glu	Arg	Ser	Gln	Gln	Thr	Ser	Leu	Phe	Leu	Leu	Lys	His	Gly	
65					70					75					80	
Leu	Thr	Arg	Asp	Pro	Ile	His	Gln	Arg	Glu	Arg	Val	Asp	Val	Phe	Pro	
				85					90					95		
Gln	Phe	Asn	Lys	Pro	Pro	Trp	Val	Phe	Arg	Ile	Ser	Lys	Leu	Ser	Arg	
			100					105					110			
Leu	Ile	Val	Pro	Ile	Phe	Thr	Leu	Asn	Glu	Gln	Leu	Cys	Phe	Ser	Lys	
		115					120					125				
Leu	Gln	Ile	Arg	Asp	Arg	Pro	Arg	Phe	Ala	Gly	Arg	Gly	Thr	Tyr	Gly	
	130					135					140					
Arg	Val	His	Ile	Tyr	Pro	Ser	Ser	Lys	Ile	Ala	Val	Lys	Thr	Met	Asp	
145					150					155					160	
Ser	Arg	Val	Phe	Asn	Arg	Glu	Leu	Ile	Asn	Ala	Ile	Leu	Ala	Ser	Glu	
				165					170					175		
Gly	Ser	Ile	Arg	Ala	Gly	Glu	Arg	Leu	Gly	Ile	Ser	Ser	Ile	Val	Cys	
			180					185					190			
Leu	Leu	Gly	Phe	Ser	Leu	Gln	Thr	Lys	Gln	Leu	Leu	Phe	Pro	Ala	Tyr	
		195					200					205				
Asp	Met	Asp	Met	Asp	Glu	Tyr	Ile	Val	Arg	Leu	Ser	Arg	Arg	Leu	Thr	
	210					215					220					
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Leu Leu Asp Tyr Ile Asn Gly Thr Gly Leu Thr Lys Tyr Thr Gly Thr
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Ala Leu Leu Glu Val Ile Leu Leu Gly Arg Leu Pro Gly Gln Leu Pro
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Ile Ser Val His Arg Thr Pro His Tyr His Tyr Tyr Gly His Lys Leu
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Ser Pro Asp Leu Ala Leu Asp Thr Leu Ala Tyr Arg Cys Val Leu Ala
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 Ala Arg Cys Asp Thr Met Ser Gly Gly Met Ile Val Leu Gln His Thr
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150 155 160	
gat agc gac gat gat ggg tct acg cca tcg gat gta att gaa ttt ccg	6105
Asp Ser Asp Asp Asp Gly Ser Thr Pro Ser Asp Val Ile Glu Phe Arg	

165	170	175	
gat tcc gac gcg gaa tca tca tgc gac ggg gaa gac ttt ata gtg gaa gaa			6153
Asp Ser Asp Ala Glu Ser Ser Asp Gly Glu Asp Phe Ile Val Glu Glu			
180	185	190	195
gaa tca gag gag agc acc gat tct tgt gaa cca gac ggg gta ccc ggc			6201
Glu Ser Glu Glu Ser Thr Asp Ser Cys Glu Pro Asp Gly Val Pro Gly			
	200	205	210
gat tgt tat cga gac ggg gat ggg tgc aac acc ccg tcc cca aag aga			6249
Asp Cys Tyr Arg Asp Gly Asp Gly Cys Asn Thr Pro Ser Pro Lys Arg			
	215	220	225
ccc cag cgt gcc atc gag cga tac gcg ggt gca gaa acc gcg gaa tat			6297
Pro Gln Arg Ala Ile Glu Arg Tyr Ala Gly Ala Glu Thr Ala Glu Tyr			
	230	235	240
aca gcc gcg aaa gcg ctc acc gcg ttg ggc gag ggg ggt gta gat tgg			6345
Thr Ala Ala Lys Ala Leu Thr Ala Leu Gly Glu Gly Gly Val Asp Trp			
	245	250	255
aag cga cgt cga cac gaa gcc ccg cgc cgg cat gat ata ccg ccc ccc			6393
Lys Arg Arg Arg His Glu Ala Pro Arg Arg His Asp Ile Pro Pro Pro			
260	265	270	275
cat ggc gtg tag tctttataaa taaatacaat ggtttggctc gtgtcttttt			6445
His Gly Val			
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ttgaacgtct ccattaaccc acgggggtccc cacacggggcc gtgtggt atg aat ctc			6561
			Met Asn Leu
			280
tgc gga tcc cgc ggt gag cac ccg ggc ggt gaa tat gcc gga ctt tac			6609
Cys Gly Ser Arg Gly Glu His Pro Gly Gly Glu Tyr Ala Gly Leu Tyr			
	285	290	295
tgc aca cga cac gat acc ccc gcg cac cag gct ctc atg aac gac gcc			6657
Cys Thr Arg His Asp Thr Pro Ala His Gln Ala Leu Met Asn Asp Ala			
	300	305	310
gaa cgg tac ttc gcc gcc gcg cta tgc gcc ata tct acc gag gcc tac			6705
Glu Arg Tyr Phe Ala Ala Ala Leu Cys Ala Ile Ser Thr Glu Ala Tyr			
	315	320	325
gag gct ttt ata cac agc ccc tcc gag aga ccg tgc gcg agt ttg tgg			6753
Glu Ala Phe Ile His Ser Pro Ser Glu Arg Pro Cys Ala Ser Leu Trp			
330	335	340	345
ggg agg gca aag gac gcc ttc gga cgg atg tgc ggg gag ctc gca gcg			6801
Gly Arg Ala Lys Asp Ala Phe Gly Arg Met Cys Gly Glu Leu Ala Ala			
	350	355	360
gat aga caa cgt cca ccc tgc gtt ccg ccg atc cgc aga gcg gtg tta			6849

Asp	Arg	Gln	Arg	Pro	Pro	Ser	Val	Pro	Pro	Ile	Arg	Arg	Ala	Val	Leu	
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tcg	tta	tta	cgc	gag	caa	tgc	atg	ccg	gat	cca	caa	tcg	cat	ctg	gag	6897
Ser	Leu	Leu	Arg	Glu	Gln	Cys	Met	Pro	Asp	Pro	Gln	Ser	His	Leu	Glu	
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Leu	Ser	Glu	Arg	Leu	Ile	Leu	Met	Ala	Tyr	Trp	Cys	Cys	Leu	Gly	His	
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Glu Asn Glu Thr Ala Asp Glu Phe Leu Arg Arg Ile Gly Lys Tyr Gln	
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His Lys Ile Tyr His Arg Lys Lys Phe Cys Tyr Ile Thr Leu Ile Ile	
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Val Phe Val Phe Ala Met Thr Gly Ala Ala Phe Ala Leu Gly Tyr Ile	
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Thr Ser Gln Phe Val Gly	
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Glu	Leu	Thr	Gln	Asp	Asp	Tyr	Val	Cys	Glu	Asp	Gly	Gln	Asp	Leu	Met		
	645					650					655						
ggc	tcg	cct	gta	atc	ccg	ctg	gcc	gag	gtc	ttc	cac	acc	cga	ttc	tcg	16096	
Gly	Ser	Pro	Val	Ile	Pro	Leu	Ala	Glu	Val	Phe	His	Thr	Arg	Phe	Ser		
	660				665					670					675		
gag	gcc	ggc	gcg	cga	gaa	cca	aca	gga	gcc	gat	cgc	tcc	ctt	gag	aca	16144	
Glu	Ala	Gly	Ala	Arg	Glu	Pro	Thr	Gly	Ala	Asp	Arg	Ser	Leu	Glu	Thr		
				680					685					690			
gtc	tct	ctc	gga	acg	aag	ctt	gct	agg	tct	cca	aaa	cca	ccg	atg	aac	16192	
Val	Ser	Leu	Gly	Thr	Lys	Leu	Ala	Arg	Ser	Pro	Lys	Pro	Pro	Met	Asn		
			695					700					705				
gat	ggg	gaa	acg	ggc	aga	ggg	acg	acc	cct	ccg	ttc	ccg	cag	gcc	ttc	16240	
Asp	Gly	Glu	Thr	Gly	Arg	Gly	Thr	Thr	Pro	Pro	Phe	Pro	Gln	Ala	Phe		
		710					715					720					
tcc	cct	gta	tcc	ccc	gcg	tct	cct	gtt	gga	gac	gcc	gcc	ggg	aac	gat	16288	
Ser	Pro	Val	Ser	Pro	Ala	Ser	Pro	Val	Gly	Asp	Ala	Ala	Gly	Asn	Asp		
		725					730				735						
caa	cgg	gaa	gac	cag	cgg	tct	ata	ccc	cga	caa	acg	acg	aga	gga	aat	16336	
Gln	Arg	Glu	Asp	Gln	Arg	Ser	Ile	Pro	Arg	Gln	Thr	Thr	Arg	Gly	Asn		
	740				745				750					755			
tca	cca	ggg	ttg	ccg	tcg	gtg	gtc	cat	cga	gac	aga	caa	act	cag	tcc	16384	
Ser	Pro	Gly	Leu	Pro	Ser	Val	Val	His	Arg	Asp	Arg	Gln	Thr	Gln	Ser		
				760				765						770			
atc	tcg	ggg	aaa	aag	ccg	ggc	gat	gag	caa	gcg	ggg	cat	gcg	cat	gca	16432	
Ile	Ser	Gly	Lys	Lys	Pro	Gly	Asp	Glu	Gln	Ala	Gly	His	Ala	His	Ala		
			775					780					785				
tcg	ggg	gac	gga	gta	gtt	ctc	cag	aaa	act	caa	cgg	ccc	gct	cag	gga	16480	
Ser	Gly	Asp	Gly	Val	Val	Leu	Gln	Lys	Thr	Gln	Arg	Pro	Ala	Gln	Gly		
		790					795					800					
aag	agc	ccg	aag	aaa	aag	act	ttg	aag	gtt	aag	gtc	cca	ctc	ccg	gcg	16528	
Lys	Ser	Pro	Lys	Lys	Lys	Thr	Leu	Lys	Val	Lys	Val	Pro	Leu	Pro	Ala		
		805				810					815						
cgg	aaa	ccc	ggg	gga	cct	gta	ccc	ggc	ccg	gtt	gag	caa	ttg	tac	cac	16576	
Arg	Lys	Pro	Gly	Gly	Pro	Val	Pro	Gly	Pro	Val	Glu	Gln	Leu	Tyr	His		

820		825		830		835	
gtc ctt tcg gac agc gtt ccc gct aag ggg gca aag gcg gac ctg ccg	16624						
Val Leu Ser Asp Ser Val Pro Ala Lys Gly Ala Lys Ala Asp Leu Pro							
840		845		850			
ttt gag acc gat gat acc cgc cca agg aaa cat gat gcc cgg ggt ata	16672						
Phe Glu Thr Asp Asp Thr Arg Pro Arg Lys His Asp Ala Arg Gly Ile							
855		860		865			
aca cct cgc gtc cct gga cgt tcg tcg ggg ggc aaa cct aga gcg ttt	16720						
Thr Pro Arg Val Pro Gly Arg Ser Ser Gly Gly Lys Pro Arg Ala Phe							
870		875		880			
ttg gcc ctg ccg gga aga tcc cac gca cca gac ccg att gag gat gac	16768						
Leu Ala Leu Pro Gly Arg Ser His Ala Pro Asp Pro Ile Glu Asp Asp							
885		890		895			
agc cca gtg gag aaa aag cca aag agt cgt gag ttt gtt tcg tct tca	16816						
Ser Pro Val Glu Lys Lys Pro Lys Ser Arg Glu Phe Val Ser Ser Ser							
900		905		910		915	
tcc tct tcc tcg tcg tgg gga tcg tca tcg gag gat gaa gac gat gaa	16864						
Ser Ser Ser Ser Ser Trp Gly Ser Ser Ser Glu Asp Glu Asp Asp Glu							
920		925		930			
ccc cgg cgc gtt tcg gtg gga agt gaa act aca ggc agc agg tcc gga	16912						
Pro Arg Arg Val Ser Val Gly Ser Glu Thr Thr Gly Ser Arg Ser Gly							
935		940		945			
cgc gaa cac gcc cct tcc ccg tca aat tcg gat gat tcg gac tca aat	16960						
Arg Glu His Ala Pro Ser Pro Ser Asn Ser Asp Asp Ser Asp Ser Asn							
950		955		960			
gat ggt ggg tcg acg aaa caa aat atc caa ccg gga tat cga tcc atc	17008						
Asp Gly Gly Ser Thr Lys Gln Asn Ile Gln Pro Gly Tyr Arg Ser Ile							
965		970		975			
agc ggt ccc gat ccg agg att cgt aag acc aaa cgt ctt gcg ggg gaa	17056						
Ser Gly Pro Asp Pro Arg Ile Arg Lys Thr Lys Arg Leu Ala Gly Glu							
980		985		990		995	
ccg ggg cgc cag aga cag aaa tca ttt tcc ctg ccg cga tcc aga	17101						
Pro Gly Arg Gln Arg Gln Lys Ser Phe Ser Leu Pro Arg Ser Arg							
1000		1005		1010			
acc ccg ata att ccc ccg gtg tcg ggg ccg ctc atg atg ccc gac	17146						
Thr Pro Ile Ile Pro Pro Val Ser Gly Pro Leu Met Met Pro Asp							
1015		1020		1025			
gga agc cct tgg ccc gga tcg gca ccc ctc cca tcc aac agg gtg	17191						
Gly Ser Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val							
1030		1035		1040			
cgg ttt gga ccg tcc ggg gag acc aga gag ggt cac tgg gag gat	17236						
Arg Phe Gly Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp							
1045		1050		1055			

gag gct gtg aga gcg	gcg cgg gct cgt tac	gag gcc tca acg gaa	17281
Glu Ala Val Arg Ala	Ala Arg Ala Arg Tyr	Glu Ala Ser Thr Glu	
1060	1065	1070	
ccc gtg ccg ctt tac	gtg ccg gag ttg gga	gat ccg gct aga cag	17326
Pro Val Pro Leu Tyr	Val Pro Glu Leu Gly	Asp Pro Ala Arg Gln	
1075	1080	1085	
tac cgc gcg ctg att	aac ctg atc tac tgt	cca gac aga gac cct	17371
Tyr Arg Ala Leu Ile	Asn Leu Ile Tyr Cys	Pro Asp Arg Asp Pro	
1090	1095	1100	
ata gca tgg ctc cag	aac ccc aag ctg acc	ggg gtc aac tcg gcc	17416
Ile Ala Trp Leu Gln	Asn Pro Lys Leu Thr	Gly Val Asn Ser Ala	
1105	1110	1115	
ctg aac cag ttc tac	caa aag ctg ttg cca	ccg gga cgg gcg ggt	17461
Leu Asn Gln Phe Tyr	Gln Lys Leu Leu Pro	Pro Gly Arg Ala Gly	
1120	1125	1130	
acc gcc gtt acg ggg	agc gta gcg tct ccc	gtt ccg cat gta ggc	17506
Thr Ala Val Thr Gly	Ser Val Ala Ser Pro	Val Pro His Val Gly	
1135	1140	1145	
gaa gcc atg gcc acg	ggg gag gcc ctc tgg	gct ctc ccc cac gcg	17551
Glu Ala Met Ala Thr	Gly Glu Ala Leu Trp	Ala Leu Pro His Ala	
1150	1155	1160	
gcc gcg gcc gtg gct	atg agc cgt cga tac	gac ccg gcc caa aaa	17596
Ala Ala Ala Val Ala	Met Ser Arg Arg Tyr	Asp Arg Ala Gln Lys	
1165	1170	1175	
cac ttt atc cta cag	agt ctc cgc aga gcc	ttt gcc agc atg gca	17641
His Phe Ile Leu Gln	Ser Leu Arg Arg Ala	Phe Ala Ser Met Ala	
1180	1185	1190	
tac ccc gag gca acg	ggc tcc agt ccg gcg	gcg ccg atc tcc cgc	17686
Tyr Pro Glu Ala Thr	Gly Ser Ser Pro Ala	Ala Arg Ile Ser Arg	
1195	1200	1205	
ggg cac cct tct cca	aca acc ccg gcc aca	cag gct ccc gac cct	17731
Gly His Pro Ser Pro	Thr Thr Pro Ala Thr	Gln Ala Pro Asp Pro	
1210	1215	1220	
cag ccg tcg gcc gcc	gca cgc tct ctt tct	gtg tgt cca ccg gat	17776
Gln Pro Ser Ala Ala	Ala Arg Ser Leu Ser	Val Cys Pro Pro Asp	
1225	1230	1235	
gat cgt tta cga act	ccg cgc aag cgc aag	tcc cag cca gtc gag	17821
Asp Arg Leu Arg Thr	Pro Arg Lys Arg Lys	Ser Gln Pro Val Glu	
1240	1245	1250	
agc aga agc ctc ctc	gac aag att agg gag	aca ccc gtc gcg gac	17866
Ser Arg Ser Leu Leu	Asp Lys Ile Arg Glu	Thr Pro Val Ala Asp	
1255	1260	1265	

gcc cgg gtt gca gac gat cat gtg gtt tcc aag gcc aag agg cgg	17911
Ala Arg Val Ala Asp Asp His Val Val Ser Lys Ala Lys Arg Arg	
1270 1275 1280	
gta tcc gag ccc gtg acc atc acc tcg ggc cct gtg gtg gat ccc	17956
Val Ser Glu Pro Val Thr Ile Thr Ser Gly Pro Val Val Asp Pro	
1285 1290 1295	
ccc gcc gta ata acg atg cca ctt gac gga ccg gcc cca aac ggg	18001
Pro Ala Val Ile Thr Met Pro Leu Asp Gly Pro Ala Pro Asn Gly	
1300 1305 1310	
gga ttt cgg cgt att ccc cgg ggg gcc ctg cat acc ccg gtc ccg	18046
Gly Phe Arg Arg Ile Pro Arg Gly Ala Leu His Thr Pro Val Pro	
1315 1320 1325	
tcg gac cag gct cgc aag gcg tac tgt acc ccc gaa acc atc gcc	18091
Ser Asp Gln Ala Arg Lys Ala Tyr Cys Thr Pro Glu Thr Ile Ala	
1330 1335 1340	
cgt ctg gtc gac gac cca ttg ttt ccc acg gcc tgg cgc cct gcg	18136
Arg Leu Val Asp Asp Pro Leu Phe Pro Thr Ala Trp Arg Pro Ala	
1345 1350 1355	
cta agc ttt gat ccc ggc gcc ttg gcg gaa atc gcc gct cgg cgt	18181
Leu Ser Phe Asp Pro Gly Ala Leu Ala Glu Ile Ala Ala Arg Arg	
1360 1365 1370	
ccg ggc gga gga gac cga cgg ttt ggt cca ccc agc gga gtg gag	18226
Pro Gly Gly Gly Asp Arg Arg Phe Gly Pro Pro Ser Gly Val Glu	
1375 1380 1385	
gcg ctg cga cgg agg tgc gcc tgg atg cgg cag atc cca gac ccg	18271
Ala Leu Arg Arg Arg Cys Ala Trp Met Arg Gln Ile Pro Asp Pro	
1390 1395 1400	
gag gat gtg agg ctt ctg atc atc tac gat ccg ttg ccc gga gag	18316
Glu Asp Val Arg Leu Leu Ile Ile Tyr Asp Pro Leu Pro Gly Glu	
1405 1410 1415	
gac atc aac ggc ccc ctc gag agc acc ctc gcg aca gat ccg gga	18361
Asp Ile Asn Gly Pro Leu Glu Ser Thr Leu Ala Thr Asp Pro Gly	
1420 1425 1430	
ccg tca tgg agt cca tcc cga ggg gga ctg tct gtg gtc ctg gca	18406
Pro Ser Trp Ser Pro Ser Arg Gly Gly Leu Ser Val Val Leu Ala	
1435 1440 1445	
gcc ctg agt aac cgg ttg tgc ctg ccg agc act cat gcc tgg gcc	18451
Ala Leu Ser Asn Arg Leu Cys Leu Pro Ser Thr His Ala Trp Ala	
1450 1455 1460	
ggg aac tgg acc ggc ccg ccg gac gtg tcc gct ttg aac gcc cgg	18496
Gly Asn Trp Thr Gly Pro Pro Asp Val Ser Ala Leu Asn Ala Arg	
1465 1470 1475	
ggc gtt tta tta ctg tcg acc cga gac ctg gcc ttt gcc ggg gcc	18541

Gly Val Leu Leu Leu	Ser Thr Arg Asp Leu	Ala Phe Ala Gly Ala	
1480	1485	1490	
gtc gag tat cta ggc	tcg cgg ttg gcc tct	gcc cgg cgc cgg ttg	18586
Val Glu Tyr Leu Gly	Ser Arg Leu Ala Ser	Ala Arg Arg Arg Leu	
1495	1500	1505	
ctg gtg ttg gac gcg	gtg gcc ctc gag agg	tgg ccc agg gat gga	18631
Leu Val Leu Asp Ala	Val Ala Leu Glu Arg	Trp Pro Arg Asp Gly	
1510	1515	1520	
ccc gct ttg tct cag	tat cac gtg tac gtc	cgg gcc ccg gcg cga	18676
Pro Ala Leu Ser Gln	Tyr His Val Tyr Val	Arg Ala Pro Ala Arg	
1525	1530	1535	
ccg gac gcc cag gcc	gtc gtc cga tgg cca	gac tcg gcg gtc aca	18721
Pro Asp Ala Gln Ala	Val Val Arg Trp Pro	Asp Ser Ala Val Thr	
1540	1545	1550	
gaa gga ctc gcc cgg	gcc gtg ttt gca tcg	tcg cgc acc ttt ggg	18766
Glu Gly Leu Ala Arg	Ala Val Phe Ala Ser	Ser Arg Thr Phe Gly	
1555	1560	1565	
cca gcg agt ttt gct	cgt atc gag act gcg	ttt gcc aac ctg tac	18811
Pro Ala Ser Phe Ala	Arg Ile Glu Thr Ala	Phe Ala Asn Leu Tyr	
1570	1575	1580	
ccg ggc gaa caa ccc	ctg tgt ttg tgc cgc	ggg ggg aac gtc gca	18856
Pro Gly Glu Gln Pro	Leu Cys Leu Cys Arg	Gly Gly Asn Val Ala	
1585	1590	1595	
tac acc gtg tgt acc	cgc gcg ggc ccc aag	acc cgc gtc ccc ctg	18901
Tyr Thr Val Cys Thr	Arg Ala Gly Pro Lys	Thr Arg Val Pro Leu	
1600	1605	1610	
tcg ccc cgt gaa tac	cgg cag tac gtg ctg	ccg ggt ttt gac ggt	18946
Ser Pro Arg Glu Tyr	Arg Gln Tyr Val Leu	Pro Gly Phe Asp Gly	
1615	1620	1625	
tgc aag gac ctc gcg	cga cag tct cgg ggt	ctg ggg ctc ggg gca	18991
Cys Lys Asp Leu Ala	Arg Gln Ser Arg Gly	Leu Gly Leu Gly Ala	
1630	1635	1640	
gcc gac ttt gtg gac	gag gcg gca cat agc	cac cgc gca gca aac	19036
Ala Asp Phe Val Asp	Glu Ala Ala His Ser	His Arg Ala Ala Asn	
1645	1650	1655	
cga tgg ggc ctg ggt	gcc gcg ctt cga ccc	gtc ttc ctt ccc gag	19081
Arg Trp Gly Leu Gly	Ala Ala Leu Arg Pro	Val Phe Leu Pro Glu	
1660	1665	1670	
gga cgg aga ccg ggg	gcc gcc ggg ccg gag	gcc ggc gac gta ccc	19126
Gly Arg Arg Pro Gly	Ala Ala Gly Pro Glu	Ala Gly Asp Val Pro	
1675	1680	1685	
acc tgg gcg agg gtg	ttt tgc cgc cac gcc	ctg ctg gaa ccc gac	19171
Thr Trp Ala Arg Val	Phe Cys Arg His Ala	Leu Leu Glu Pro Asp	

	1690		1695		1700	
cct gcc gca gaa cca	ctc gtg ctt cca ccc	gtg gcc ggt cgg tcg	19216			
Pro Ala Ala Glu Pro	Leu Val Leu Pro Pro	Val Ala Gly Arg Ser				
1705	1710	1715				
gtg gcg ctg tat gcg	tcg gcg gac gag gct	cgg aat gcc ctc ccc	19261			
Val Ala Leu Tyr Ala	Ser Ala Asp Glu Ala	Arg Asn Ala Leu Pro				
1720	1725	1730				
ccg att ccc aga gta	atg tgg ccg ccc ggt	ttt ggg gcc gcg gag	19306			
Pro Ile Pro Arg Val	Met Trp Pro Pro Gly	Phe Gly Ala Ala Glu				
1735	1740	1745				
acg gtg ttg gag ggg	agc gac gga aca cgg	ttc gtg ttc gga cac	19351			
Thr Val Leu Glu Gly	Ser Asp Gly Thr Arg	Phe Val Phe Gly His				
1750	1755	1760				
cac ggg ggc tcg gaa	cgg ccg tca gaa acc	cag gcg ggg cga cag	19396			
His Gly Gly Ser Glu	Arg Pro Ser Glu Thr	Gln Ala Gly Arg Gln				
1765	1770	1775				
cgg cgc acc gca gac	gac aga gaa cac gct	ttg gag ctg gac gat	19441			
Arg Arg Thr Ala Asp	Asp Arg Glu His Ala	Leu Glu Leu Asp Asp				
1780	1785	1790				
tgg gag gtg ggg tgt	gaa gac gcg tgg gac	agc gag gag ggg ggc	19486			
Trp Glu Val Gly Cys	Glu Asp Ala Trp Asp	Ser Glu Glu Gly Gly				
1795	1800	1805				
ggg gac gac ggg gac	gca ccg ggg tca tcc	ttt ggg gtg agc atc	19531			
Gly Asp Asp Gly Asp	Ala Pro Gly Ser Ser	Phe Gly Val Ser Ile				
1810	1815	1820				
gtg tcg gtg gcc ccg	ggt gtg ctg cga gac	cgc cgg gtg ggt ttg	19576			
Val Ser Val Ala Pro	Gly Val Leu Arg Asp	Arg Arg Val Gly Leu				
1825	1830	1835				
cgc ccg gcg gtc aag	gtg gag ctg ttg tcc	tcg tcc tcg tcc tcc	19621			
Arg Pro Ala Val Lys	Val Glu Leu Leu Ser	Ser Ser Ser Ser Ser				
1840	1845	1850				
gag gac gag gac gat	gtg tgg gga ggg cgc	ggg ggg agg agc ccc	19666			
Glu Asp Glu Asp Asp	Val Trp Gly Gly Arg	Gly Gly Arg Ser Pro				
1855	1860	1865				
ccg cag agt cgg ggg	tga cggagtcctc	tccttttctc	19714			
Pro Gln Ser Arg Gly		gtgagcgcca				
1870						
ctggcgcgcg gactgtttgt	tgtaataaaa agcggaacgg	tttttatgaa aaaagtgtct	19774			
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cccccggttt ctgggcgccc	ggcggacccc gggagaggag	gccagccctc tcgcggcccc	19894			
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		cgaccatcgg				

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caatacaccc gacttcctat atacagtgtt tttgtttgtg gacttacctt tatttacggg	20074
tattacaggg ggggtggagaa atgtcttcgt atcgctcttt atctaaataa agacagaatc	20134
taaaatgtca cttagctgta tacccggtccc aaggttatac caatcaactt ccctgtttgt	20194
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ctcgccacaa ctcaaatctt agaacgcatg gcagttctgc tacgtgtttg gatgcccgga	20374
cattagaata cagccagttg ttacc atg gat acc ata tta ggc ggc ggt agc	20426
Met Asp Thr Ile Leu Ala Gly Gly Ser	
1875	
ggc acc tcc gac gct tcg gat aat acc tgc acc ata tgc atg agc	20471
Gly Thr Ser Asp Ala Ser Asp Asn Thr Cys Thr Ile Cys Met Ser	
1880 1885 1890	
acc gtt tcc gat ctc gga aaa acc atg ccg tgt ttg cac gac ttc	20516
Thr Val Ser Asp Leu Gly Lys Thr Met Pro Cys Leu His Asp Phe	
1895 1900 1905	
tgc ttt gtt tgt att cgg gca tgg acc tcc acc agc gtc cag tgt	20561
Cys Phe Val Cys Ile Arg Ala Trp Thr Ser Thr Ser Val Gln Cys	
1910 1915 1920	
cct ctc tgc cgg tgt cca gtg caa tcc atc ctg cat aag atc gta	20606
Pro Leu Cys Arg Cys Pro Val Gln Ser Ile Leu His Lys Ile Val	
1925 1930 1935	
agt gat aca agt tac aag gaa tat gaa gtg cac cca tcc gac gac	20651
Ser Asp Thr Ser Tyr Lys Glu Tyr Glu Val His Pro Ser Asp Asp	
1940 1945 1950	
gat ggt ttt tct gag ccg tca ttt gaa gat tcc atc gac atc cta	20696
Asp Gly Phe Ser Glu Pro Ser Phe Glu Asp Ser Ile Asp Ile Leu	
1955 1960 1965	
ccg gga gat gtc ata gat ctt ctg cca cca agc cca gga ccg agt	20741
Pro Gly Asp Val Ile Asp Leu Leu Pro Pro Ser Pro Gly Pro Ser	
1970 1975 1980	
cgg gag tcc atc caa cag cca aca tca aga tcg agt cgg gag ccc	20786
Arg Glu Ser Ile Gln Gln Pro Thr Ser Arg Ser Ser Arg Glu Pro	
1985 1990 1995	
att caa tca cca aac cct ggg ccc ctt caa tcg tcg gct aga gag	20831
Ile Gln Ser Pro Asn Pro Gly Pro Leu Gln Ser Ser Ala Arg Glu	
2000 2005 2010	
ccc aca gca gag tca cca agt gac tct caa cag gat tct ata caa	20876
Pro Thr Ala Glu Ser Pro Ser Asp Ser Gln Gln Asp Ser Ile Gln	

2015	2020	2025	
cca ccg acc cga gac tcg Pro Pro Thr Arg Asp Ser 2030	agc cct ggt gta acc Ser Pro Gly Val Thr 2035	aaa aca tgc tct Lys Thr Cys Ser 2040	20921
acc gca tca ttt tta cgg Thr Ala Ser Phe Leu Arg 2045	aag gta ttt ttt Lys Val Phe Phe 2050	aaa gac caa cct gct Lys Asp Gln Pro Ala 2055	20966
gtt cga tcg gcg acc ccg Val Arg Ser Ala Thr Pro 2060	gtg gtg tat ggc tcg Val Val Tyr Gly Ser 2065	att gaa tct gca Ile Glu Ser Ala 2070	21011
cag caa ccc cgg acc ggg Gln Gln Pro Arg Thr Gly 2075	ggg cag gac tac cgt Gly Gln Asp Tyr Arg 2080	gat cgt cca gta Asp Arg Pro Val 2085	21056
tct gtg gga att aat caa Ser Val Gly Ile Asn Gln 2090	gac cca cga acc atg Asp Pro Arg Thr Met 2095	gac aga ctg cct Asp Arg Leu Pro 2100	21101
ttt cga gcc acg gat aga Phe Arg Ala Thr Asp Arg 2105	gga aca gag gga aac Gly Thr Glu Gly Asn 2110	gcg aga ttc ccg Ala Arg Phe Pro 2115	21146
tgt tac atg caa cct tta Cys Tyr Met Gln Pro Leu 2120	ctc gga tgg ctt gat Leu Gly Trp Leu Asp 2125	gat caa ctt gcg Asp Asp Gln Leu Ala 2130	21191
gaa ctg tat caa ccc gaa Glu Leu Tyr Gln Pro Glu 2135	att gta gag cct aca Ile Val Glu Pro Thr 2140	aaa atg ttg ata Lys Met Leu Ile 2145	21236
tta aac tat ata ggt att Leu Asn Tyr Ile Gly Ile 2150	tac ggg cgt gat gag Tyr Gly Arg Asp Glu 2155	gcg gga tta aaa Ala Gly Leu Lys 2160	21281
aca tcc ctg cgt tgt ctt Thr Ser Leu Arg Cys Leu 2165	ttg cat gat tca aca Leu His Asp Ser Thr 2170	gga ccg ttt gta Gly Pro Phe Val 2175	21326
aca aac atg tta ttc ttg Thr Asn Met Leu Phe Leu 2180	ttg gat cga tgt acc Leu Asp Arg Cys Thr 2185	gat cca acc cgc Asp Pro Thr Arg 2190	21371
cta acc atg caa acc tgg Leu Thr Met Gln Thr Trp 2195	acc tgg aaa gat aca Thr Trp Lys Asp Thr 2200	gcc atc caa cta Ala Ile Gln Leu 2205	21416
att aca ggt cca att gta Ile Thr Gly Pro Ile Val 2210	aga cca gaa acc acc Arg Pro Glu Thr Thr 2215	tca acc ggg gag Ser Thr Gly Glu 2220	21461
acc tct cgt ggc gat gaa Thr Ser Arg Gly Asp Glu 2225	agg gat acc cga ttg Arg Asp Thr Arg Leu 2230	gta aat aca ccc Val Asn Thr Pro 2235	21506

caa	aaa	gtc	agg	ctt	ttt	tct	gtg	tta	ccg	ggg	att	aaa	ccg	gga	21551
Gln	Lys	Val	Arg	Leu	Phe	Ser	Val	Leu	Pro	Gly	Ile	Lys	Pro	Gly	
2240					2245					2250					
agc	gca	agg	ggt	gct	aag	cgc	cgt	tta	ttt	cat	acc	ggc	aga	gac	21596
Ser	Ala	Arg	Gly	Ala	Lys	Arg	Arg	Leu	Phe	His	Thr	Gly	Arg	Asp	
2255					2260					2265					
gtt	aaa	cga	tgc	tta	aca	ata	gac	ctg	aca	tct	gag	tct	gat	tcg	21641
Val	Lys	Arg	Cys	Leu	Thr	Ile	Asp	Leu	Thr	Ser	Glu	Ser	Asp	Ser	
2270					2275					2280					
gca	tgt	aag	gga	agt	aaa	acc	cgc	aaa	gtt	gcc	tct	cca	cag	ggg	21686
Ala	Cys	Lys	Gly	Ser	Lys	Thr	Arg	Lys	Val	Ala	Ser	Pro	Gln	Gly	
2285					2290					2295					
gag	tcc	aat	acc	ccc	tcc	acc	tcc	gga	tca	aca	tca	ggt	tca	ctg	21731
Glu	Ser	Asn	Thr	Pro	Ser	Thr	Ser	Gly	Ser	Thr	Ser	Gly	Ser	Leu	
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Lys	His	Leu	Thr	Lys	Lys	Ser	Ser	Ala	Gly	Lys	Ala	Gly	Lys	Gly	
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Ile	Pro	Asn	Lys	Met	Lys	Lys	Ser								
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Leu Ser Asp Ser	Lys Asp Ile Tyr	Val Leu Ala His Pro Val	Thr			
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Asp Thr Glu Thr	Phe Thr Pro Val	Ser Ser Gln Leu Asp Ser	Val			
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Glu Tyr Asn Arg Leu Leu Asn Ser Gly Glu Glu Ile Leu Pro Ser	
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Ile Arg Val Val Ile Ile Gly Gln Asp Pro Tyr Pro Thr Ala Gly	
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Gln Arg Val Leu Gln Arg Leu Cys Glu Asn Arg Thr Gly Leu Val	
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Phe Met Leu Trp Gly Ala His Ala Gln Lys Thr Thr Gln Pro Asn	
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Ser Arg Cys His Leu Val Leu Thr His Ala His Pro Ser Pro Leu	
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Ser Arg Val Pro Phe Arg Asn Cys Arg His Phe Val Gln Ala Asn	
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Glu Tyr Phe Thr Arg Lys Gly Glu Pro Glu Ile Asp Trp Ser Val	

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Arg Glu Leu Ile Leu Ser Gly His Asn Asn Val Val Leu Gln Thr			
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Tyr Thr Gly Lys Trp Ser Asp Cys Arg Lys His Gly Lys Ser Val			
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Met Tyr Asn Thr Gly Glu Ala Arg His Pro Thr Cys Lys Ala His			
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Gln Ala	Ile Pro	Arg Phe	Val Cys	Glu Ala	Arg Glu	Val Thr	Gly	
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Ala Ser	Pro Ser	Leu Phe	Val Gln	Leu Ser	Val Tyr	Leu Arg	Arg	
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Val Glu	Cys Gln	Ile Gly	Pro Leu	Glu Lys	Met Arg	Arg Phe	Leu	
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Tyr Glu	Gly Val	Leu Trp	Leu Leu	Asn Thr	Leu Met	Tyr Val	Val	
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Asp Asn	Asn Pro	Phe Thr	Lys Thr	Arg Val	Leu Pro	His Tyr	Met	
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Phe Val	Lys Leu	Leu Asn	Pro Gln	Pro Gly	Thr Ala	Pro Asn	Ile	
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Ile Lys	Ala Ile	Tyr Ser	Cys Gly	Val Gly	Gln Arg	Phe Asp	Leu	
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gag atc gca aaa	ttt gga cat gtt	ggt cgc ggg gtc gga	ccc ggt	54762
Glu Ile Ala Lys	Phe Gly His Val	Val Arg Gly Val Gly	Pro Gly	
3090	3095	3100		
gac aga tct gtt	gcc agt tac gtt	cga agt gag ctc aat	cgc acc	54807
Asp Arg Ser Val	Ala Ser Tyr Val	Arg Ser Glu Leu Asn	Arg Thr	
3105	3110	3115		
ggg aag aca tgg	gcg gta tca tcc	aat aat aac tgc	gtg ttt	54852
Gly Lys Thr Trp	Ala Val Ser Ser	Asn Asn Asn Cys	Val Phe	
3120	3125	3130		
gat cga gtg gcc	tta ctt gca gcg	gga tcg ggg gcg	gtg gat	54897
Asp Arg Val Ala	Leu Leu Ala Ala	Gly Ser Gly Ala Val	Asp Arg	
3135	3140	3145		
gac ctt tgc gga	aca ttt gat gtt	gaa gtg gag gac	cct acg	54942
Asp Leu Cys Gly	Thr Phe Asp Val	Glu Val Glu Asp	Pro Thr	
3150	3155	3160		
gca gat tat ctc	gtg tcc ctc ccc	gtg acg cat tta	aca ttg	54987
Ala Asp Tyr Leu	Val Ser Leu Pro	Val Thr His Leu Thr	Leu Val	
3165	3170	3175		
gcg ggg gta gat	gtt acg cgc gag	aat aag cta aaa	ttg ttt	55032
Ala Gly Val Asp	Val Thr Arg Glu	Asn Lys Leu Lys	Leu Phe	
3180	3185	3190		
aca ccc acc gcc	att aat acc aca	aat ggc ttt atg	tac gta	55077
Thr Pro Thr Ala	Ile Asn Thr Thr	Asn Gly Phe Met	Tyr Val	
3195	3200	3205		
aac gaa gcc agt	ttt tca ttg gtg	tat atg cgt atg	ttg gag	55122
Asn Glu Ala Ser	Phe Ser Leu Val	Tyr Met Arg Met	Leu Glu	
3210	3215	3220		
cca gaa agt ttg	cag gag cta gtg	agt gga tta ttc	gac ggg	55167
Pro Glu Ser Leu	Gln Glu Leu Val	Ser Gly Leu Phe	Asp Gly	
3225	3230	3235		
ccc gag ata cga	gac gcg ctt aac	gga agt aac gac	gat gaa	55212
Pro Glu Ile Arg	Asp Ala Leu Asn	Gly Ser Asn Asp	Asp Glu	
3240	3245	3250		
aca agt ata att	gtt agt cgg cgc	gct gct gat gtg	gtt acg	55257
Thr Ser Ile Ile	Val Ser Arg Arg	Ala Ala Asp Val	Val Thr	
3255	3260	3265		
gac gta aaa gca	gat gat gtg ccg	att tcg ggt gaa	ccg tat	55302
Asp Val Lys Ala	Asp Asp Val Pro	Ile Ser Gly Glu	Pro Tyr	
3270	3275	3280		

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Glu	Lys	Gln	Pro	Arg	Arg	Arg	Lys	Lys	Ser	Asp	His	Ile	Thr	Leu	
			3285					3290						3295	
agt	aac	ttt	gta	cag	att	agg	acc	atc	ccc	cgg	gta	atg	gac	att	55392
Ser	Asn	Phe	Val	Gln	Ile	Arg	Thr	Ile	Pro	Arg	Val	Met	Asp	Ile	
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Trp	Asp	Pro	Arg	His	Lys	Ala	Thr	Thr	His	Cys	Ile	Arg	Ala	Leu	
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Lys	Trp	Pro	Gly	Leu	Glu	Asp	Glu	Leu	Asn	Glu	Ala	Arg	Glu	Thr	
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Ile	Tyr	Thr	Ala	Val	Val	Ala	Val	Tyr	Gly	Glu	Arg	Gly	Glu	Leu	
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Pro	Phe	Phe	Gly	His	Ala	Tyr	Gly	Arg	Asp	Leu	Thr	Ser	Cys	Gln	
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Asn	Cys	Tyr	Ala	Val	Ile	Glu	Asp	Leu	Thr	Arg	Ser	Tyr	Val	Asn	
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Ala	Leu	Pro	Ser	Asp	Asp	Asp	Thr	Asp	Gln	Val	Ala	Gln	Asp	Leu	
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Ile	Arg	Thr	Ile	Val	Asp	Thr	Ala	Asn	Ser	Leu	Leu	Arg	Glu	Val	
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Pro	Gln	Leu	Pro	Cys	Tyr	Lys	Glu	Thr	Ser	His	Leu	Ala	Lys	Lys	
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Glu	Gly	Val	Arg	Ile	Leu	Arg	Leu	Ala	Lys	Thr	Gly	Val	Gly	Leu	
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Cys	Tyr	Asn	Gly	Ala	Val	Arg	Leu	Cys	Arg	Leu	Leu	Gly	Ser	Ser	
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Lys	Thr	Gln	Arg												
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	Met Ser Ala Ser Arg Ile
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Arg Ala Lys Cys Phe Arg Leu Gly Gln Arg Cys His Thr Arg Phe	
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Tyr Asp Val Leu Lys Lys Asp Ile Asp Asn Val Arg Arg Gly Phe	
	3610 3615 3620
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Ala Asp Ala Phe Asn Pro Arg Leu Ala Lys Leu Leu Ser Pro Leu	
	3625 3630 3635

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Ser His Val Asp	Val Gln Arg Ala Val	Arg Ile Ser Met Ser Phe	
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Glu Val Asn Leu	Gly Arg Arg Arg Pro	Asp Cys Val Cys Ile Ile	
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caa acg gaa tcc	agt ggt gcc gga aag	acc gtt tgt ttt ata gtg	60419
Gln Thr Glu Ser	Ser Gly Ala Gly Lys	Thr Val Cys Phe Ile Val	
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Glu Leu Lys Ser	Cys Arg Phe Ser Ala	Asn Ile His Thr Pro Thr	
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aag tat cac cag	ttt tgc gag ggt atg	cgc cag ctg agg gat acc	60509
Lys Tyr His Gln	Phe Cys Glu Gly Met	Arg Gln Leu Arg Asp Thr	
3700	3705	3710	
atg gct tta ata	aag gaa acc aca ccc	acg gga tct gat gaa ata	60554
Met Ala Leu Ile	Lys Glu Thr Thr Pro	Thr Gly Ser Asp Glu Ile	
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Met Val Thr Pro	Leu Leu Val Phe Val	Ser Gln Arg Gly Leu Asn	
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ctg tta cag gta	act cgg tta ccc cca	aag gtg att cat gga aac	60644
Leu Leu Gln Val	Thr Arg Leu Pro Pro	Lys Val Ile His Gly Asn	
3745	3750	3755	
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Leu Val Met Leu	Ala Ser His Leu Glu	Asn Val Ala Glu Tyr Thr	
3760	3765	3770	
ccc ccg ata agg	tcc gtt aga gag cga	aga cgt cta tgc aaa aag	60734
Pro Pro Ile Arg	Ser Val Arg Glu Arg	Arg Arg Leu Cys Lys Lys	
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Lys Ile His Val	Cys Ser Leu Ala Lys	Lys Arg Ala Lys Ser Cys	
3790	3795	3800	
cat cgt tcc gct	tta aca aag ttt gaa	gaa aat gca gct tgt ggg	60824
His Arg Ser Ala	Leu Thr Lys Phe Glu	Glu Asn Ala Ala Cys Gly	
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Val Asp Leu Pro	Leu Arg Arg Pro Ser	Leu Gly Ala Cys Gly Gly	
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Ile Leu Gln Ser	Ile Thr Gly Met Phe	Ser His Gly	
3835	3840		
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Met

acg Thr 3845	gcg Ala	aga Arg	tat Tyr	ggg Gly	ttc Phe 3850	gga Gly	tct Ser	atc Ile	tcg Ser	ttt Phe 3855	ccg Pro	aat Asn	aaa Lys	tgt Cys	61022
ggg Gly 3860	ata Ile	ttt Phe	ttg Leu	tct Ser	acc Thr 3865	act Thr	aag Lys	aac Asn	ttt Phe	ata Ile 3870	gcc Ala	ccc Pro	aac Asn	ttc Phe	61067
ccc Pro 3875	ata Ile	cac His	tac Tyr	tgg Trp	acg Thr 3880	gct Ala	ccc Pro	gcg Ala	ttt Phe	gag Glu 3885	tta Leu	aga Arg	ggg Gly	cgt Arg	61112
atg Met 3890	aat Asn	ccc Pro	gat Asp	ttg Leu	gaa Glu 3895	aaa Lys	aat Asn	acg Thr	tta Leu	acg Thr 3900	tta Leu	aaa Lys	aat Asn	gcg Ala	61157
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gcc Ala 3980	aaa Lys	aat Asn	gat Asp	gca Ala	ccg Pro 3985	ttg Leu	cag Gln	tac Tyr	gat Asp	aca Thr 3990	aac Asn	ttt Phe	caa Gln	gtg Val	61427
gat Asp 3995	ttt Phe	atc Ile	acc Thr	ctg Leu	gtg Val 4000	tac Tyr	ttg Leu	gga Gly	agg Arg	gca Ala 4005	agg Arg	ggc Gly	aat Asn	aac Asn	61472
tct Ser 4010	cca Pro	ggg Gly	att Ile	gtt Val	ttc Phe 4015	ggg Gly	cca Pro	tgg Trp	tat Tyr	cgt Arg 4020	act Thr	ctg Leu	cag Gln	gaa Glu	61517
cgg Arg 4025	ctt Leu	gtg Val	tta Leu	gat Asp	agg Arg 4030	ccc Pro	gta Val	gct Ala	gca Ala	cgc Arg 4035	gga Gly	gtt Val	gat Asp	tgt Cys	61562
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Cys Leu Gln Ser Ala Gly	Arg Met Tyr Val Gly	Asp Arg Ala Tyr			
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Ser Ala Phe Glu Cys Ala	Val Leu Cys Leu Tyr	Leu Met Tyr Arg			
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Thr Ser Asn Ser Val His	Glu Pro Gln Val Ser	Ser Phe Gly Asn			
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Leu Ile Glu His Leu Pro	Glu Tyr Thr Glu Thr	Phe Val Asn Tyr			
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Met Thr Thr His Glu Asn	Lys Asn Ser Tyr Gln	Phe Cys Tyr Asp			
4115	4120	4125			
cgt cta cca cgc gac cag	ttt cat gct cgt ggg	ggg cgg tat gat	61877		
Arg Leu Pro Arg Asp Gln	Phe His Ala Arg Gly	Gly Arg Tyr Asp			
4130	4135	4140			
caa ggc gcc tta acg tca	cat tct gtt atg gat	gcg ctt ata cgg	61922		
Gln Gly Ala Leu Thr Ser	His Ser Val Met Asp	Ala Leu Ile Arg			
4145	4150	4155			
ttg cag gtc cta ccg cct	gca cct gga cag ttt	aat cct ggg gtt	61967		
Leu Gln Val Leu Pro Pro	Ala Pro Gly Gln Phe	Asn Pro Gly Val			
4160	4165	4170			
aat gac att att gat cgc	aat cat acc gca tat	gtg gac aag att	62012		
Asn Asp Ile Ile Asp Arg	Asn His Thr Ala Tyr	Val Asp Lys Ile			
4175	4180	4185			
caa cag gcg gcc gcg gcg	tat tta gaa cgg gcc	caa aac gtg ttt	62057		
Gln Gln Ala Ala Ala Ala	Tyr Leu Glu Arg Ala	Gln Asn Val Phe			
4190	4195	4200			
ctt atg gaa gac caa act	cta tta agg tta aca	att gac acg att	62102		
Leu Met Glu Asp Gln Thr	Leu Leu Arg Leu Thr	Ile Asp Thr Ile			
4205	4210	4215			
acg gcg tta tta tta tta	agg cgc tta tta tgg	aac ggg aac gta	62147		
Thr Ala Leu Leu Leu Leu	Arg Arg Leu Leu Trp	Asn Gly Asn Val			
4220	4225	4230			
tac gga gat aaa cta aaa	aat aat ttt caa ctg	ggg ttg att gtg	62192		
Tyr Gly Asp Lys Leu Lys	Asn Asn Phe Gln Leu	Gly Leu Ile Val			
4235	4240	4245			
tca gaa gca aca gga acc	cct acc aac aat gta	atc ttg cgc gga	62237		
Ser Glu Ala Thr Gly Thr	Pro Thr Asn Asn Val	Ile Leu Arg Gly			
4250	4255	4260			

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Ala	Thr	Gly	Phe	Asp	Gly	Lys	Phe	Lys	Ser	Gly	Asn	Asn	Asn	Phe	
4265					4270					4275					
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Gln	Phe	Leu	Cys	Glu	Arg	Tyr	Ile	Ala	Pro	Leu	Tyr	Thr	Leu	Asn	
4280					4285					4290					
cgg	acc	aca	gag	ctg	act	gaa	atg	ttt	cct	gga	tta	ggt	gct	ctt	62372
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4295					4300					4305					
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Cys	Leu	Asp	Ala	His	Thr	Gln	Leu	Ser	Arg	Gly	Ser	Leu	Gly	Arg	
4310					4315					4320					
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Thr	Val	Ile	Asp	Ile	Ser	Ser	Gly	Gln	Tyr	Gln	Asp	Arg	Leu	Ile	
4325					4330					4335					
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4340					4345					4350					
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4370					4375					4380					
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Ile	Pro	Gln	Phe	Ala	Ser	Thr	Pro								
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gtg Val 4480	ggt Gly	gaa Glu	gta Val	atc Ile	gca Ala 4485	atc Ile	att Ile	gag Glu	gac Asp	ata Ile 4490	cgc Arg	gga Gly	cct Pro	ttt Phe	62962
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gaa Glu 4870	ttg Leu	gat Asp	tct Ser	ttt Phe	tat Tyr 4875	agt Ser	ggg Gly	gag Glu	tct Ser	caa Gln 4880	atg Met	gac Asp	gga Gly	gag Glu	64132
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His	Arg Arg Arg Arg Val	Ser Pro Ser Tyr Trp	Gln Arg Arg His			
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Arg	Val Ser Asn Gly Gln	His Glu Glu Leu Ala	Gly Val Val Ala			
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Lys	Leu Gln Gln Glu Val	Thr Glu Leu Lys Ser	Gln Asn Gly Thr			
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Gln	Met Pro Leu Ser His	His Thr Asn Ile Pro	Glu Gly Thr Arg			
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Thr	Val Gly Gln Asp Val	Asn Ala Val Glu Ala	Ser Ser Lys Ala			
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taaa atg gcg atc aga acg ggg ttt tgt aat ccc ttt tta acc caa	74290
Met Ala Ile Arg Thr Gly Phe Cys Asn Pro Phe Leu Thr Gln	
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gca tca ggg att aaa tat aac cca aga acc ggg cgc ggt agt aac	74335
Ala Ser Gly Ile Lys Tyr Asn Pro Arg Thr Gly Arg Gly Ser Asn	
5045 5050 5055	
aga gaa ttt ctt cat agt tac aaa act acc atg tca tcg ttt caa	74380
Arg Glu Phe Leu His Ser Tyr Lys Thr Thr Met Ser Ser Phe Gln	
5060 5065 5070	
ttt ttg gcc cct aaa tgt tta gat gaa gat gtg ccc atg gaa gaa	74425
Phe Leu Ala Pro Lys Cys Leu Asp Glu Asp Val Pro Met Glu Glu	
5075 5080 5085	
cga aag ggg gtt cac gtc ggt aca ctt agt cga ccg cct aaa gtt	74470
Arg Lys Gly Val His Val Gly Thr Leu Ser Arg Pro Pro Lys Val	
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Tyr Cys Asn Gly Lys Glu Val Pro Ile Leu Asp Phe Arg Cys Ser	
5105 5110 5115	
agc ccc tgg cct aga cgc gtg aat att tgg ggg gaa atc gac ttt	74560
Ser Pro Trp Pro Arg Arg Val Asn Ile Trp Gly Glu Ile Asp Phe	
5120 5125 5130	
cgt ggg gat aag ttt gac ccc cgc ttt aac aca ttc cat gta tat	74605
Arg Gly Asp Lys Phe Asp Pro Arg Phe Asn Thr Phe His Val Tyr	
5135 5140 5145	
gat att gtc gaa aca aca gaa gcc gcg tct aat gga gat gta tcc	74650
Asp Ile Val Glu Thr Thr Glu Ala Ala Ser Asn Gly Asp Val Ser	
5150 5155 5160	
cgg ttt gca act gca aca cga ccg ctt ggt acc gtt att act tta	74695
Arg Phe Ala Thr Ala Thr Arg Pro Leu Gly Thr Val Ile Thr Leu	
5165 5170 5175	

ctt ggc atg tcc	cga tgt gga aaa agg	gtg gca gtt cat gta tac	74740
Leu Gly Met Ser	Arg Cys Gly Lys Arg	Val Ala Val His Val Tyr	
5180	5185	5190	
ggc atc tgt caa	tat ttt tat ata aac	aaa gcc gag gtg gat acc	74785
Gly Ile Cys Gln	Tyr Phe Tyr Ile Asn	Lys Ala Glu Val Asp Thr	
5195	5200	5205	
gct tgt ggc ata	cgt tcc ggt agc gag	tta tct gta tta ctt gcc	74830
Ala Cys Gly Ile	Arg Ser Gly Ser Glu	Leu Ser Val Leu Leu Ala	
5210	5215	5220	
gag tgt tta cgc	agt tct atg ata aca	caa aat gat gca acg tta	74875
Glu Cys Leu Arg	Ser Ser Met Ile Thr	Gln Asn Asp Ala Thr Leu	
5225	5230	5235	
aat gga gac aag	aac gct ttt cat ggt	acc tcg ttt aaa agc gca	74920
Asn Gly Asp Lys	Asn Ala Phe His Gly	Thr Ser Phe Lys Ser Ala	
5240	5245	5250	
tct cca gaa agc	ttt cgc gtt gag gtt	att gag cgc aca gat gtt	74965
Ser Pro Glu Ser	Phe Arg Val Glu Val	Ile Glu Arg Thr Asp Val	
5255	5260	5265	
tat tac tac gat	aca cag cca tgt gcg	ttt tac agg gtg tat tct	75010
Tyr Tyr Tyr Asp	Thr Gln Pro Cys Ala	Phe Tyr Arg Val Tyr Ser	
5270	5275	5280	
ccc tca tct aaa	ttt aca aat tat ctt	tgt gat aac ttt cac ccg	75055
Pro Ser Ser Lys	Phe Thr Asn Tyr Leu	Cys Asp Asn Phe His Pro	
5285	5290	5295	
gag ttg aaa aag	tat gaa ggt cgg gta	gac gct acc act cgt ttt	75100
Glu Leu Lys Lys	Tyr Glu Gly Arg Val	Asp Ala Thr Thr Arg Phe	
5300	5305	5310	
cta atg gat aat	ccc ggc ttt gtt agt	ttt ggt tgg tat caa cta	75145
Leu Met Asp Asn	Pro Gly Phe Val Ser	Phe Gly Trp Tyr Gln Leu	
5315	5320	5325	
aaa cct gga gtt	gat ggg gaa cgt gtt	cga gtt cga ccg gca agt	75190
Lys Pro Gly Val	Asp Gly Glu Arg Val	Arg Val Arg Pro Ala Ser	
5330	5335	5340	
cgc caa tta acg	tta agc gac gtt gaa	att gac tgc atg tcg gat	75235
Arg Gln Leu Thr	Leu Ser Asp Val Glu	Ile Asp Cys Met Ser Asp	
5345	5350	5355	
aat ctg cag gct	ata cca aac gat gac	tca tgg cct gac tac aag	75280
Asn Leu Gln Ala	Ile Pro Asn Asp Asp	Ser Trp Pro Asp Tyr Lys	
5360	5365	5370	
ttg tta tgt ttc	gat att gaa tgt aaa	tca gga gga tct aat gag	75325
Leu Leu Cys Phe	Asp Ile Glu Cys Lys	Ser Gly Gly Ser Asn Glu	
5375	5380	5385	

ctg gcg ttt ccc gat gca aca cat ctg gag gat ctt gta atc caa	75370
Leu Ala Phe Pro Asp Ala Thr His Leu Glu Asp Leu Val Ile Gln	
5390 5395 5400	
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Ile Ser Cys Leu Leu Tyr Ser Ile Pro Arg Gln Ser Leu Glu His	
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Ile Leu Leu Phe Ser Leu Gly Ser Cys Asp Leu Pro Gln Arg Tyr	
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Val Gln Glu Met Lys Asp Ala Gly Leu Pro Glu Pro Thr Val Leu	
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Glu Phe Asp Ser Glu Phe Glu Leu Leu Ile Ala Phe Met Thr Leu	
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Val Lys Gln Tyr Ala Pro Glu Phe Ala Thr Gly Tyr Asn Ile Val	
5465 5470 5475	
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Asn Phe Asp Trp Ala Phe Ile Met Glu Lys Leu Asn Ser Ile Tyr	
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Ser Leu Lys Leu Asp Gly Tyr Gly Ser Ile Asn Arg Gly Gly Leu	
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Phe Lys Ile Trp Asp Val Gly Lys Ser Gly Phe Gln Arg Arg Ser	
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Lys Val Lys Ile Asn Gly Leu Ile Ser Leu Asp Met Tyr Ala Ile	
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gca act gaa aaa tta aaa ctc tcg agt tat aaa tta gat tcg gtt	75820
Ala Thr Glu Lys Leu Lys Leu Ser Ser Tyr Lys Leu Asp Ser Val	
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Ala Arg Glu Ala Leu Asn Glu Ser Lys Arg Asp Leu Pro Tyr Lys	
5555 5560 5565	
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Asp Ile Pro Gly Tyr Tyr Ala Ser Gly Pro Asn Thr Arg Gly Ile	
5570 5575 5580	
att ggt gaa tat tgt ata caa gac tcg gct ctt gtg ggg aaa ctg	75955
Ile Gly Glu Tyr Cys Ile Gln Asp Ser Ala Leu Val Gly Lys Leu	
5585 5590 5595	
ttt ttt aaa tat tta cca cac ctt gag tta tcc gcg gtt gca agg	76000

Phe	Phe	Lys	Tyr	Leu	Pro	His	Leu	Glu	Leu	Ser	Ala	Val	Ala	Arg	
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cta	gct	aga	att	act	tta	acc	aag	gct	att	tac	gac	gga	cag	cag	76045
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Val	Arg	Ile	Tyr	Thr	Cys	Leu	Leu	Gly	Leu	Ala	Ser	Ser	Arg	Gly	
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Phe	Ile	Leu	Pro	Asp	Gly	Gly	Tyr	Pro	Ala	Thr	Phe	Glu	Tyr	Lys	
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Asp	Val	Ile	Pro	Asp	Val	Gly	Asp	Val	Glu	Glu	Glu	Met	Asp	Glu	
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Asp	Glu	Ser	Val	Ser	Pro	Thr	Gly	Thr	Ser	Ser	Gly	Arg	Asn	Val	
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gga	tat	aaa	gga	gcc	agg	gtt	ttt	gac	cct	gat	acg	gga	ttt	tat	76270
Gly	Tyr	Lys	Gly	Ala	Arg	Val	Phe	Asp	Pro	Asp	Thr	Gly	Phe	Tyr	
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Ile	Asp	Pro	Val	Val	Val	Leu	Asp	Phe	Ala	Ser	Leu	Tyr	Pro	Ser	
			5705					5710					5715		
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Ile	Ile	Gln	Ala	His	Asn	Leu	Cys	Phe	Thr	Thr	Leu	Thr	Leu	Asn	
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ttt	gag	acg	gtt	aaa	cgt	ttg	aat	cca	tcc	gat	tat	gcc	acc	ttt	76405
Phe	Glu	Thr	Val	Lys	Arg	Leu	Asn	Pro	Ser	Asp	Tyr	Ala	Thr	Phe	
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aca	gtt	gga	gga	aaa	cgt	ctt	ttt	ttt	gtg	cgc	tct	aac	gtt	cga	76450
Thr	Val	Gly	Gly	Lys	Arg	Leu	Phe	Phe	Val	Arg	Ser	Asn	Val	Arg	
			5750					5755					5760		
gaa	agt	ctg	ctg	ggt	gtt	ctt	tta	aaa	gac	tgg	ttg	gct	atg	cgc	76495
Glu	Ser	Leu	Leu	Gly	Val	Leu	Leu	Lys	Asp	Trp	Leu	Ala	Met	Arg	
			5765					5770					5775		
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Lys	Ala	Ile	Arg	Ala	Arg	Ile	Pro	Gly	Ser	Ser	Ser	Asp	Glu	Ala	
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Val	Leu	Leu	Asp	Lys	Gln	Gln	Ala	Ala	Ile	Lys	Val	Val	Cys	Asn	
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Ser	Val	Tyr	Gly	Phe	Thr	Gly	Val	Ala	Gln	Gly	Phe	Leu	Pro	Cys	

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Leu Tyr Val Ala Ala Thr Val Thr Thr Ile Gly Arg Gln Met Leu						
	5825		5830		5835	
tta agt acc aga gat tat att cat aat aac tgg gcc gca ttt gaa						76720
Leu Ser Thr Arg Asp Tyr Ile His Asn Asn Trp Ala Ala Phe Glu						
	5840		5845		5850	
cgt ttt att aca gcg ttt cca gac att gaa agt agc gtt ctc tcc						76765
Arg Phe Ile Thr Ala Phe Pro Asp Ile Glu Ser Ser Val Leu Ser						
	5855		5860		5865	
caa aaa gcg tac gag gta aag gtt ata tat gga gat acg gat tct						76810
Gln Lys Ala Tyr Glu Val Lys Val Ile Tyr Gly Asp Thr Asp Ser						
	5870		5875		5880	
gtg ttt atc cga ttc aag ggt gtt agt gtt gag ggg ata gct aaa						76855
Val Phe Ile Arg Phe Lys Gly Val Ser Val Glu Gly Ile Ala Lys						
	5885		5890		5895	
atc ggc gag aaa atg gca cat ata att tca acg gct ctg ttt tgt						76900
Ile Gly Glu Lys Met Ala His Ile Ile Ser Thr Ala Leu Phe Cys						
	5900		5905		5910	
cct cct ata aag ttg gag tgt gaa aaa act ttt ata aaa ctt ttg						76945
Pro Pro Ile Lys Leu Glu Cys Glu Lys Thr Phe Ile Lys Leu Leu						
	5915		5920		5925	
ctt ata aca aag aaa aag tac att ggg gta att tac ggc gga aag						76990
Leu Ile Thr Lys Lys Lys Tyr Ile Gly Val Ile Tyr Gly Gly Lys						
	5930		5935		5940	
gtt tta atg aag gga gtc gac ttg gtt aga aaa aac aac tgt caa						77035
Val Leu Met Lys Gly Val Asp Leu Val Arg Lys Asn Asn Cys Gln						
	5945		5950		5955	
ttt att aac gat tat gcc cgc aaa ctt gta gaa ctg ttg tta tat						77080
Phe Ile Asn Asp Tyr Ala Arg Lys Leu Val Glu Leu Leu Leu Tyr						
	5960		5965		5970	
gac gac acc gtc tcg cgt gct gcg gcg gag gcg tcg tgt gtt tcc						77125
Asp Asp Thr Val Ser Arg Ala Ala Ala Glu Ala Ser Cys Val Ser						
	5975		5980		5985	
att gct gaa tgg aat aga cgg gcc atg ccg tct ggg atg gcc ggg						77170
Ile Ala Glu Trp Asn Arg Arg Ala Met Pro Ser Gly Met Ala Gly						
	5990		5995		6000	
ttt gga cgc ata att gca gat gca cat cgc cag att aca tca ccc						77215
Phe Gly Arg Ile Ile Ala Asp Ala His Arg Gln Ile Thr Ser Pro						
	6005		6010		6015	
aaa ttg gat att aat aag ttt gtt atg acg gcc gag ctt agt cgt						77260
Lys Leu Asp Ile Asn Lys Phe Val Met Thr Ala Glu Leu Ser Arg						
	6020		6025		6030	

cca cca tcc gcc	tac ata aac cgt cgc	ttg gct cac tta aca gta	77305
Pro Pro Ser Ala	Tyr Ile Asn Arg Arg	Leu Ala His Leu Thr Val	
6035	6040	6045	
tat tat aaa tta	gta atg aga cag ggt	caa atc cca aac gtt cga	77350
Tyr Tyr Lys Leu	Val Met Arg Gln Gly	Gln Ile Pro Asn Val Arg	
6050	6055	6060	
gaa cgc atc cct	tat gtt att gtg gcc	ccc aca gac gaa gtg gag	77395
Glu Arg Ile Pro	Tyr Val Ile Val Ala	Pro Thr Asp Glu Val Glu	
6065	6070	6075	
gct gat gca aaa	agt gta gct ttg cta	cgt gga gat cct tta cag	77440
Ala Asp Ala Lys	Ser Val Ala Leu Leu	Arg Gly Asp Pro Leu Gln	
6080	6085	6090	
aat acc gca ggt	aaa cgg tgt ggg gaa	gca aag cgt aag tta ata	77485
Asn Thr Ala Gly	Lys Arg Cys Gly Glu	Ala Lys Arg Lys Leu Ile	
6095	6100	6105	
ata tct gac tta	gcg gaa gat ccc att	cac gta aca tca cac ggg	77530
Ile Ser Asp Leu	Ala Glu Asp Pro Ile	His Val Thr Ser His Gly	
6110	6115	6120	
ctg tct tta aac	att gac tat tat ttt	tct cat ctc att ggg acg	77575
Leu Ser Leu Asn	Ile Asp Tyr Tyr Phe	Ser His Leu Ile Gly Thr	
6125	6130	6135	
gcg agt gta act	ttt aag gcg tta ttt	gga aac gac act aaa ctc	77620
Ala Ser Val Thr	Phe Lys Ala Leu Phe	Gly Asn Asp Thr Lys Leu	
6140	6145	6150	
aca gaa cgg ctt	tta aaa cgt ttt att	cca gag aca cga gtt gtt	77665
Thr Glu Arg Leu	Leu Lys Arg Phe Ile	Pro Glu Thr Arg Val Val	
6155	6160	6165	
aac gtt aaa atg	cta aac cgc ttg cag	gcg gca ggc ttt gtt tgt	77710
Asn Val Lys Met	Leu Asn Arg Leu Gln	Ala Ala Gly Phe Val Cys	
6170	6175	6180	
ata cac gcc ccg	tgc tgg gat aat aaa	atg aac act gaa gct gaa	77755
Ile His Ala Pro	Cys Trp Asp Asn Lys	Met Asn Thr Glu Ala Glu	
6185	6190	6195	
atc acc gag gag	gaa caa agt cat caa	ata atg cgt aga gtc ttt	77800
Ile Thr Glu Glu	Glu Gln Ser His Gln	Ile Met Arg Arg Val Phe	
6200	6205	6210	
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Cys Ile Pro Lys	Ala Ile Leu His Gln	Ser	
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Met Tyr Glu Ser Glu Asn Ala Ser Glu	
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His His Pro Glu Leu Glu Asp Val Phe Ser Glu Asn Thr Gly Asp	
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Gly Met Arg Ala Arg Asp Leu Ile Thr Asp Thr Asp Val Asn Leu	
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Asn Asp Ser Glu Lys Ser Ala Tyr Val Val Pro Cys Glu His Ser	
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cgataaatgg tctaaataact tcacgcgtgt gccttggttt gcaaccttag atcaat atg			80866
		Met	
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Gln Cys Cys Asp Gly Asp Leu Pro Ile Phe Asp Pro Gln Arg Pro			
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Pro Ala Arg Cys Val Phe Gln Phe Asn Gly Glu Asp Asn Val Ser			
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Glu Ala Phe Pro Val Glu Tyr Ile Met Arg Leu Met Ala Asn Trp			
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Ala Gln Val Asp Cys Asp Pro Tyr Ile Lys Ile Gln Asn Thr Gly			
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Val Ser Val Leu Phe Gln Gly Phe Phe Phe Arg Pro Thr Asn Ala			
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Pro Val Ala Glu Val Ser Ile Asp Ser Asn Asn Val Ile Leu Ser			
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Ser Thr Leu Ser Thr Gly Ile Asn Leu Ser Ala Leu Glu Ser Ile			
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Lys Arg Gly Gly Gly Ile Asp Arg Arg Pro Leu Gln Ala Leu Met			
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Trp Val Asn Cys Phe Val Arg Met Pro Tyr Val Gln Leu Ser Phe			
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Arg Phe Met Gly Pro Glu Asp Pro Ser Arg Thr Ile Lys Leu Met	
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Leu Asp Glu Tyr Ile Arg Trp Arg Pro Ser Phe Arg Ser Pro Pro	
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Asn Ala Asn Thr Ile Arg Arg Thr Ala Met Phe Ala Glu Thr Asp	
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Pro Met Thr Trp Leu Arg Pro Thr Val Gly Leu Lys Arg Thr Phe	
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Pro Arg Phe Gly Gly Leu Asn Lys Gln Pro Ile His Val Pro Pro	
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Pro His Arg Phe Ile Ser Phe Phe	Gly Ser Leu Leu Glu Tyr Thr		
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Cys Met Tyr	Ala Ala Tyr Thr Leu	Ile Gly Thr Ile Pro	Ser Glu	
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Glu Tyr Ile Ile Pro Pro Glu Ser Thr Thr Pro Val Glu Leu Met	
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gag tat att agc act atc gtc tca aaa ctt aag gcg gtg acg cga	96198
Glu Tyr Ile Ser Thr Ile Val Ser Lys Leu Lys Ala Val Thr Arg	
7405 7410 7415	
caa gat gag cga gtg tac cga tgt tgt gga gaa ctt atc cat tgc	96243
Gln Asp Glu Arg Val Tyr Arg Cys Cys Gly Glu Leu Ile His Cys	
7420 7425 7430	
cgt att aac cta cga tcc gtt tcc atg gaa acg tgg ttg act tcc	96288
Arg Ile Asn Leu Arg Ser Val Ser Met Glu Thr Trp Leu Thr Ser	
7435 7440 7445	
cca att ctc tgt tta act ccc cga gtc cgc caa gca att gaa ggg	96333
Pro Ile Leu Cys Leu Thr Pro Arg Val Arg Gln Ala Ile Glu Gly	
7450 7455 7460	
cgg agg gac gaa att cgt cgg gct ata tta gaa ccg ttt ttg aaa	96378
Arg Arg Asp Glu Ile Arg Arg Ala Ile Leu Glu Pro Phe Leu Lys	
7465 7470 7475	
gat caa tac ccc gct tta gct acc ctt gga cta cag tct gct tta	96423
Asp Gln Tyr Pro Ala Leu Ala Thr Leu Gly Leu Gln Ser Ala Leu	
7480 7485 7490	
aag tac gaa gac ttt tat tta act aag tta gag gaa ggt aaa tta	96468
Lys Tyr Glu Asp Phe Tyr Leu Thr Lys Leu Glu Glu Gly Lys Leu	
7495 7500 7505	
gag tcg ctt tgc caa ttc ttt tta aga ctg gcg gcc acc gtg aca	96513
Glu Ser Leu Cys Gln Phe Phe Leu Arg Leu Ala Ala Thr Val Thr	
7510 7515 7520	
aca gaa atc gta aac ctg cct aaa atc gca act ctt att ccc gga	96558
Thr Glu Ile Val Asn Leu Pro Lys Ile Ala Thr Leu Ile Pro Gly	
7525 7530 7535	
ata aat gat ggt tat aca tgg act gat gtc tgt cgg gta ttt ttc	96603
Ile Asn Asp Gly Tyr Thr Trp Thr Asp Val Cys Arg Val Phe Phe	
7540 7545 7550	
aca gcg ttg gca tgt cag aaa att gtc ccg gct aca ccg gtt atg	96648
Thr Ala Leu Ala Cys Gln Lys Ile Val Pro Ala Thr Pro Val Met	
7555 7560 7565	
atg ttt tta ggt cga gag acc ggg gca acg gcc agt tgt tat tta	96693

Met	Phe	Leu	Gly	Arg	Glu	Thr	Gly	Ala	Thr	Ala	Ser	Cys	Tyr	Leu	
		7570					7575					7580			
atg	gac	ccg	gaa	tcc	atc	act	gtt	ggg	aga	gct	gtt	cga	gct	atc	96738
Met	Asp	Pro	Glu	Ser	Ile	Thr	Val	Gly	Arg	Ala	Val	Arg	Ala	Ile	
		7585					7590					7595			
aca	ggc	gat	gtg	gga	acg	gta	tta	caa	agt	cga	ggt	gga	gtg	gga	96783
Thr	Gly	Asp	Val	Gly	Thr	Val	Leu	Gln	Ser	Arg	Gly	Gly	Val	Gly	
		7600					7605					7610			
att	tct	cta	cag	agt	ctg	aat	tta	ata	cct	acg	gaa	aat	caa	acg	96828
Ile	Ser	Leu	Gln	Ser	Leu	Asn	Leu	Ile	Pro	Thr	Glu	Asn	Gln	Thr	
		7615					7620					7625			
aaa	ggt	ctt	ctt	gca	gtt	tta	aaa	ctt	tta	gat	tgc	atg	gtt	atg	96873
Lys	Gly	Leu	Leu	Ala	Val	Leu	Lys	Leu	Leu	Asp	Cys	Met	Val	Met	
		7630					7635					7640			
gca	att	aac	agt	gat	tgt	gaa	cga	cca	act	gga	gtt	tgt	gtt	tac	96918
Ala	Ile	Asn	Ser	Asp	Cys	Glu	Arg	Pro	Thr	Gly	Val	Cys	Val	Tyr	
		7645					7650					7655			
ata	gaa	cca	tgg	cac	gtc	gat	cta	caa	act	gtt	ttg	gcc	aca	cgt	96963
Ile	Glu	Pro	Trp	His	Val	Asp	Leu	Gln	Thr	Val	Leu	Ala	Thr	Arg	
		7660					7665					7670			
gga	atg	ttg	gtt	cgt	gat	gaa	ata	ttt	cga	tgt	gat	aac	ata	ttt	97008
Gly	Met	Leu	Val	Arg	Asp	Glu	Ile	Phe	Arg	Cys	Asp	Asn	Ile	Phe	
		7675					7680					7685			
tgt	tgt	tta	tgg	acc	cca	gat	tta	ttt	ttt	gaa	aga	tac	cta	agc	97053
Cys	Cys	Leu	Trp	Thr	Pro	Asp	Leu	Phe	Phe	Glu	Arg	Tyr	Leu	Ser	
		7690					7695					7700			
tat	cta	aaa	ggg	gct	agt	aat	gtt	cag	tgg	act	ctt	ttt	gat	aac	97098
Tyr	Leu	Lys	Gly	Ala	Ser	Asn	Val	Gln	Trp	Thr	Leu	Phe	Asp	Asn	
		7705					7710					7715			
aga	gcc	gat	atc	ctt	cga	aca	tta	cac	ggg	gag	gca	ttc	act	tca	97143
Arg	Ala	Asp	Ile	Leu	Arg	Thr	Leu	His	Gly	Glu	Ala	Phe	Thr	Ser	
		7720					7725					7730			
acc	tat	tta	cgt	tta	gag	aga	gaa	gga	tta	ggc	gtt	tct	tct	gtt	97188
Thr	Tyr	Leu	Arg	Leu	Glu	Arg	Glu	Gly	Leu	Gly	Val	Ser	Ser	Val	
		7735					7740					7745			
ccc	att	caa	gat	atc	gca	ttc	aca	atc	ata	cgc	agt	gct	gct	gta	97233
Pro	Ile	Gln	Asp	Ile	Ala	Phe	Thr	Ile	Ile	Arg	Ser	Ala	Ala	Val	
		7750					7755					7760			
aca	gga	agc	ccc	ttt	tta	atg	ttc	aaa	gat	gcc	tgt	aat	cgt	aat	97278
Thr	Gly	Ser	Pro	Phe	Leu	Met	Phe	Lys	Asp	Ala	Cys	Asn	Arg	Asn	
		7765					7770					7775			
tat	cat	atg	aat	acc	caa	gga	aat	gct	atc	acg	ggg	tca	aat	ttg	97323
Tyr	His	Met	Asn	Thr	Gln	Gly	Asn	Ala	Ile	Thr	Gly	Ser	Asn	Leu	

7780	7785	7790	
tgt acg gaa att gtt caa aag gca gac gct cat caa cat ggc gta 97368			
Cys Thr Glu Ile Val Gln Lys Ala Asp Ala His Gln His Gly Val			
7795	7800	7805	
tgt aat ctt gcc agc ata aat ctt aca acg tgc tta tcc aaa ggc 97413			
Cys Asn Leu Ala Ser Ile Asn Leu Thr Thr Cys Leu Ser Lys Gly			
7810	7815	7820	
cca gtg tca ttt aat tta aac gac ctt caa ttg aca gca aga acg 97458			
Pro Val Ser Phe Asn Leu Asn Asp Leu Gln Leu Thr Ala Arg Thr			
7825	7830	7835	
act gtt att ttt tta aac ggg gtc ctg gcg gct ggg aac ttt cca 97503			
Thr Val Ile Phe Leu Asn Gly Val Leu Ala Ala Gly Asn Phe Pro			
7840	7845	7850	
tgt aaa aaa tca tgt aaa ggt gta aaa aac aac cga tca ctt ggc 97548			
Cys Lys Lys Ser Cys Lys Gly Val Lys Asn Asn Arg Ser Leu Gly			
7855	7860	7865	
att ggc ata caa ggg tta cat aca act tgt ctc cgc tta gga ttt 97593			
Ile Gly Ile Gln Gly Leu His Thr Thr Cys Leu Arg Leu Gly Phe			
7870	7875	7880	
gat tta act tcc caa cca gct aga cgg tta aat gta caa ata gcg 97638			
Asp Leu Thr Ser Gln Pro Ala Arg Arg Leu Asn Val Gln Ile Ala			
7885	7890	7895	
gag tta atg ttg tat gag aca atg aaa aca agc atg gaa atg tgt 97683			
Glu Leu Met Leu Tyr Glu Thr Met Lys Thr Ser Met Glu Met Cys			
7900	7905	7910	
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Lys Ile Gly Gly Leu Ala Pro Phe Lys Gly Phe Thr Glu Ser Lys			
7915	7920	7925	
tat gct aag gga tgg tta cac caa gat ggg ttt tct acg ata agt 97773			
Tyr Ala Lys Gly Trp Leu His Gln Asp Gly Phe Ser Thr Ile Ser			
7930	7935	7940	
tat tta gat tta cca tgg tgt acc ctg cga gat gat att tgc gct 97818			
Tyr Leu Asp Leu Pro Trp Cys Thr Leu Arg Asp Asp Ile Cys Ala			
7945	7950	7955	
tat ggg tta tac aac tcg cag ttc tta gcg tta atg ccc aca gtt 97863			
Tyr Gly Leu Tyr Asn Ser Gln Phe Leu Ala Leu Met Pro Thr Val			
7960	7965	7970	
tca tct gca cag gta acg gag tgc agt gag ggt ttc tct cca att 97908			
Ser Ser Ala Gln Val Thr Glu Cys Ser Glu Gly Phe Ser Pro Ile			
7975	7980	7985	
tat aat aat atg ttt agt aag gtc acc acc tcg ggt gag tta ctt 97953			
Tyr Asn Asn Met Phe Ser Lys Val Thr Thr Ser Gly Glu Leu Leu			
7990	7995	8000	

aga ccc aac tta gac ctt atg gac gaa cta aga gat atg tat tca	97998
Arg Pro Asn Leu Asp Leu Met Asp Glu Leu Arg Asp Met Tyr Ser	
8005 8010 8015	
tgt gaa gaa aaa cga ctg gaa gtt ata aac ata ctt gag aaa aac	98043
Cys Glu Glu Lys Arg Leu Glu Val Ile Asn Ile Leu Glu Lys Asn	
8020 8025 8030	
caa tgg tca gta ata cgt tcg ttt ggc tgt tta tct aat agt cac	98088
Gln Trp Ser Val Ile Arg Ser Phe Gly Cys Leu Ser Asn Ser His	
8035 8040 8045	
cca ctc tta aaa tat aaa aca gcg ttt gaa tat gag caa gag gat	98133
Pro Leu Leu Lys Tyr Lys Thr Ala Phe Glu Tyr Glu Gln Glu Asp	
8050 8055 8060	
ctc gtt gat atg tgt gca gaa agg gcg cca ttt att gag caa agt	98178
Leu Val Asp Met Cys Ala Glu Arg Ala Pro Phe Ile Asp Gln Ser	
8065 8070 8075	
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Gln Ser Met Thr Leu Phe Ile Glu Glu Arg Pro Asp Gly Thr Ile	
8080 8085 8090	
ccc gcc tcc aaa ata atg aat ttg ctt ata cgt gcc tat aaa gcc	98268
Pro Ala Ser Lys Ile Met Asn Leu Leu Ile Arg Ala Tyr Lys Ala	
8095 8100 8105	
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Gly Leu Lys Thr Gly Met Tyr Tyr Cys Lys Ile Arg Lys Ala Thr	
8110 8115 8120	
aac agc gga ctg ttt gcg gga ggc gaa tta acc tgt acc agt tgt	98358
Asn Ser Gly Leu Phe Ala Gly Gly Glu Leu Thr Cys Thr Ser Cys	
8125 8130 8135	
gct tta taa atttacacgg gaaactattc caaa atg gat cag aaa gat tgc	98409
Ala Leu Met Asp Gln Lys Asp Cys	
8140 8145	
agt cat ttt ttt tac agg ccg gag tgt cca gat ata aac aat tta	98454
Ser His Phe Phe Tyr Arg Pro Glu Cys Pro Asp Ile Asn Asn Leu	
8150 8155 8160	
cgt gcc ctg agc att tcg aat cgt tgg tta gaa agc gat ttt atc	98499
Arg Ala Leu Ser Ile Ser Asn Arg Trp Leu Glu Ser Asp Phe Ile	
8165 8170 8175	
att gaa gat gat tat caa tac ttg gac tgt tta acg gaa gat gaa	98544
Ile Glu Asp Asp Tyr Gln Tyr Leu Asp Cys Leu Thr Glu Asp Glu	
8180 8185 8190	
cta ata ttc tac aga ttt att ttt aca ttt tta tcg gcg gca gat	98589
Leu Ile Phe Tyr Arg Phe Ile Phe Thr Phe Leu Ser Ala Ala Asp	
8195 8200 8205	

gat ctg gta aat gtt	aat ttg ggc tct cta	acc caa ctc ttt tcc	98634
Asp Leu Val Asn Val	Asn Leu Gly Ser Leu	Thr Gln Leu Phe Ser	
8210	8215	8220	
caa aag gat att cac	cat tac tac att gaa	caa gag tgc atc gag	98679
Gln Lys Asp Ile His	His Tyr Tyr Ile Glu	Gln Glu Cys Ile Glu	
8225	8230	8235	
gtt gtc cac gcg cgt	gtc tat agt caa att	caa cta atg ttg ttc	98724
Val Val His Ala Arg	Val Tyr Ser Gln Ile	Gln Leu Met Leu Phe	
8240	8245	8250	
aga ggg gat gaa tcg	ttg cgg gta caa tac	gta aat gtc act att	98769
Arg Gly Asp Glu Ser	Leu Arg Val Gln Tyr	Val Asn Val Thr Ile	
8255	8260	8265	
aat aat ccg tcg atc	caa caa aaa gta caa	tggttg gaa gaa aag	98814
Asn Asn Pro Ser Ile	Gln Gln Lys Val Gln	Trp Leu Glu Glu Lys	
8270	8275	8280	
gta cgg gac aac cca	tcc gtt gca gaa aaa	tat ata cta atg att	98859
Val Arg Asp Asn Pro	Ser Val Ala Glu Lys	Tyr Ile Leu Met Ile	
8285	8290	8295	
ctt ata gag ggc att	ttt ttt gta tca tcg	ttc gcg gct att gca	98904
Leu Ile Glu Gly Ile	Phe Phe Val Ser Ser	Phe Ala Ala Ile Ala	
8300	8305	8310	
tat tta cgc aat aac	gga cta ttt gtt gta	act tgt caa ttt aac	98949
Tyr Leu Arg Asn Asn	Gly Leu Phe Val Val	Thr Cys Gln Phe Asn	
8315	8320	8325	
gac ctt ata agc cga	gat gaa gcc ata cat	acc agc gca tcg tgt	98994
Asp Leu Ile Ser Arg	Asp Glu Ala Ile His	Thr Ser Ala Ser Cys	
8330	8335	8340	
tgt ata tac aat aac	tat gta ccc gaa aaa	ccc gct atc acc aga	99039
Cys Ile Tyr Asn Asn	Tyr Val Pro Glu Lys	Pro Ala Ile Thr Arg	
8345	8350	8355	
ata cat caa ctg ttt	tcg gaa gcc gtt gaa	atc gag tgt gcg ttt	99084
Ile His Gln Leu Phe	Ser Glu Ala Val Glu	Ile Glu Cys Ala Phe	
8360	8365	8370	
tta aaa tcc cat gca	ccc aaa acc cgt ttg	gtg aac gtc gat gca	99129
Leu Lys Ser His Ala	Pro Lys Thr Arg Leu	Val Asn Val Asp Ala	
8375	8380	8385	
att aca caa tac gtg	aaa ttc agc gcg gac	agg ctt tta tca gcg	99174
Ile Thr Gln Tyr Val	Lys Phe Ser Ala Asp	Arg Leu Leu Ser Ala	
8390	8395	8400	
att aat gta cca aaa	cta ttt aac acc cca	cct ccc gat tcg gac	99219
Ile Asn Val Pro Lys	Leu Phe Asn Thr Pro	Pro Pro Asp Ser Asp	
8405	8410	8415	
ttt cca ctt gca ttt	atg att gca gat aaa	aac aca aat ttt ttt	99264

Phe	Pro	Leu	Ala	Phe	Met	Ile	Ala	Asp	Lys	Asn	Thr	Asn	Phe	Phe		
				8420					8425					8430		
gag	aga	cac	agt	aca	tct	tat	gcg	ggc	aca	gtg	ata	aac	gat	tta		99309
Glu	Arg	His	Ser	Thr	Ser	Tyr	Ala	Gly	Thr	Val	Ile	Asn	Asp	Leu		
				8435					8440					8445		
taa	cat	gtatata	cgagcaaaat	aaaacaatga	accattaagt	cgctcttatg										99362
tgt	gttttaa	ttccaatatt	ttgttaatac	agtgtttagt	gggagtggag	taggaataaa										99422
ct	gttttaaaa	atacgtgcgt	attggcgagc	cattttttcc	ccctttaagt	tatgatataa										99482
gg	tgttaata	accatatatg	ggctctgccgt	attttgcata	atatttacac	gtttcattaa										99542
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tact	gtcacc	tccgatcgg	tagatgcata	tttggaaacg	gacactccgt	tttctgtttt										99722
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 Met Asp Leu

 agg tcg cgt aca gac gat gct ttg gac atg gaa ttg cat gcg ggt 101144
 Arg Ser Arg Thr Asp Asp Ala Leu Asp Met Glu Leu His Ala Gly
 8450 8455 8460

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 Phe Asp Ala Pro Glu Ile Ala Arg Ala Val Leu Thr Glu Lys Thr
 8465 8470 8475

 ctt act ggt tta att tcg tct ata tca cct ctg gtt aat aga cta 101234
 Leu Thr Gly Leu Ile Ser Ser Ile Ser Pro Leu Val Asn Arg Leu
 8480 8485 8490

 agg gat tct att tta ata ttc agc gac gaa gga tta att att cac 101279
 Arg Asp Ser Ile Leu Ile Phe Ser Asp Glu Gly Leu Ile Ile His
 8495 8500 8505

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 Cys Ser Leu Glu Thr Glu Gln Leu Tyr Ile Pro Ile Pro Ala Asn
 8510 8515 8520

 atg ttt gac cag tat aat tgg act ggg ccg aga atg gtt gta ctc 101369
 Met Phe Asp Gln Tyr Asn Trp Thr Gly Pro Arg Met Val Val Leu
 8525 8530 8535

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 Ala Ala Thr Glu Gly Arg Ser Ser Leu Ile Asp Ala Phe Arg His
 8540 8545 8550

 aca aaa gat ccg tcg acc cca aca cgg tta tat ttt aaa ttt acc 101459
 Thr Lys Asp Pro Ser Thr Pro Thr Arg Leu Tyr Phe Lys Phe Thr
 8555 8560 8565

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 Gly Gln Pro Pro Glu Arg Ser Ile Ile Gln Thr Met Val Trp Gln
 8570 8575 8580

 cgc ccg ggt gat tgt ggt cca gat gat caa gta caa tgt tac aaa 101549
 Arg Pro Gly Asp Cys Gly Pro Asp Asp Gln Val Gln Cys Tyr Lys
 8585 8590 8595

 caa gtt gta aaa cgt gaa ctc gct tgt tat aca atg atg ttt cca 101594
 Gln Val Val Lys Arg Glu Leu Ala Cys Tyr Thr Met Met Phe Pro
 8600 8605 8610

 aat cta act cca gat ata agc att tgc tta aaa cgc gat caa ttc 101639

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Thr	Arg	Leu	Gln	Arg	Leu	Leu	Lys	Thr	Phe	Gly	Phe	Thr	Thr	Cys	
	8630					8635					8640				
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Phe	Ile	Leu	Thr	Ala	Thr	Asp	Met	Tyr	Ile	Gln	Thr	Ala	Gly	Gly	
	8645					8650					8655				
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Gly	Phe	Ile	Ser	Phe	Asn	Val	Ser	Leu	Asp	Ile	Asn	Gly	Ser	Lys	
	8660					8665					8670				
cct	aca	cca	tat	aat	tta	ata	cgc	tca	atc	aca	aat	tca	aaa	agg	101819
Pro	Thr	Pro	Tyr	Asn	Leu	Ile	Arg	Ser	Ile	Thr	Asn	Ser	Lys	Arg	
	8675					8680					8685				
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Ile	Leu	Asn	Asn	Val	Val	Tyr	Gly	Ser	Gly	Ser	Met	Arg	Glu	Phe	
	8690					8695					8700				
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Gly	Val	Leu	Leu	Glu	Thr	His	Ser	Gly	Phe	Arg	Ser	Ala	Val	Gln	
	8705					8710					8715				
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Asn	Leu	Lys	Leu	Thr	Arg	Asp	Glu	Thr	Cys	Tyr	Ile	Asn	Phe	Tyr	
	8720					8725					8730				
ctc	gcc	tta	act	aac	tcc	ccc	atg	gtt	gga	ttg	tat	atc	caa	cgt	101999
Leu	Ala	Leu	Thr	Asn	Ser	Pro	Met	Val	Gly	Leu	Tyr	Ile	Gln	Arg	
	8735					8740					8745				
tcc	gca	ccc	gtg	cat	tct	ttt	ttt	tat	gca	acg	ttc	tta	agt	ccc	102044
Ser	Ala	Pro	Val	His	Ser	Phe	Phe	Tyr	Ala	Thr	Phe	Leu	Ser	Pro	
	8750					8755					8760				
aaa	gac	ctt	aaa	gaa	aaa	tta	acc	tcg	atg	caa	tta	ttt	gcg	aac	102089
Lys	Asp	Leu	Lys	Glu	Lys	Leu	Thr	Ser	Met	Gln	Leu	Phe	Ala	Asn	
	8765					8770					8775				
atg	gaa	tct	gtg	aag	gat	gaa	cca	cca	tta	aaa	aaa	aga	cgc	aat	102134
Met	Glu	Ser	Val	Lys	Asp	Glu	Pro	Pro	Leu	Lys	Lys	Arg	Arg	Asn	
	8780					8785					8790				
tta	tta	aca	aaa	aga	aac	gaa	aaa	aat	acc	gga	aat	aaa	atg	ggg	102179
Leu	Leu	Thr	Lys	Arg	Asn	Glu	Lys	Asn	Thr	Gly	Asn	Lys	Met	Gly	
	8795					8800					8805				
ggg	aaa	ctc	ccc	gaa	acc	aca	tg	cag	gag	gga	atc	gga	att	cgc	102224
Gly	Lys	Leu	Pro	Glu	Thr	Thr	Trp	Gln	Glu	Gly	Ile	Gly	Ile	Arg	
	8810					8815					8820				
gaa	tat	tgt	gtg	gct	cct	cca	gtg	gac	cct	gca	gga	acc	ctg	gat	102269
Glu	Tyr	Cys	Val	Ala	Pro	Pro	Val	Asp	Pro	Ala	Gly	Thr	Leu	Asp	

8825	8830	8835	
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Tyr Ser Glu Leu Ser Arg Glu	Ser Asp Val Ile Cys	Thr Val Lys	
8840	8845	8850	
taa gtgcaacttt tgcttatatt ttacatacaa	acttgtgtgtg	accatagatg	102367
aacacatttt tatttgtttt gaattattaa	acttaagac	atg gcc	102421
		Met Ala Val Asn Gly	
		8855	
gaa aga gct gtc cat gat gaa	aac ctg ggt gtg tta	gac aga gaa	102466
Glu Arg Ala Val His Asp Glu	Asn Leu Gly Val Leu	Asp Arg Glu	
8860	8865	8870	
tta atc cgc gct caa tca atc	caa gga tgt gtc gga	aac cct caa	102511
Leu Ile Arg Ala Gln Ser Ile	Gln Gly Cys Val Gly	Asn Pro Gln	
8875	8880	8885	
gaa tgt aat tcg tgt gca ata	acc tca gca tcg cgg	ttg ttt ctc	102556
Glu Cys Asn Ser Cys Ala Ile	Thr Ser Ala Ser Arg	Leu Phe Leu	
8890	8895	8900	
gtg gga cta caa gca agc gtt	atc acg tcc ggg tta	att tta caa	102601
Val Gly Leu Gln Ala Ser Val	Ile Thr Ser Gly Leu	Ile Leu Gln	
8905	8910	8915	
tat cac gtc tgc gaa gct gcc	gtc aat gca act att	atg ggg ttg	102646
Tyr His Val Cys Glu Ala Ala	Val Asn Ala Thr Ile	Met Gly Leu	
8920	8925	8930	
atc gtc gtt tcg ggg tta tgg	cca aca tcc gtg aaa	ttt cta cgc	102691
Ile Val Val Ser Gly Leu Trp	Pro Thr Ser Val Lys	Phe Leu Arg	
8935	8940	8945	
aca tta gca aaa ttg gga cga	tgt ttg cag acg gtg	gtc gtg ttg	102736
Thr Leu Ala Lys Leu Gly Arg	Cys Leu Gln Thr Val	Val Val Leu	
8950	8955	8960	
ggt ttt gct gtg tta tgg gcg	gtt ggt tgc cca ata	tcc cgg gat	102781
Gly Phe Ala Val Leu Trp Ala	Val Gly Cys Pro Ile	Ser Arg Asp	
8965	8970	8975	
ctt cca ttt gta gaa tta ctg	gga att tcc ata tcc	gcg att acc	102826
Leu Pro Phe Val Glu Leu Leu	Gly Ile Ser Ile Ser	Ala Ile Thr	
8980	8985	8990	
gga aca gtg gct gct gtg cat	atc cat tac tac aac	ttt gtt acg	102871
Gly Thr Val Ala Ala Val His	Ile His Tyr Tyr Asn	Phe Val Thr	
8995	9000	9005	
aca ttc aat gga ccg cat att	tat ttt tat gtt atg	atg ttg gga	102916
Thr Phe Asn Gly Pro His Ile	Tyr Phe Tyr Val Met	Met Leu Gly	
9010	9015	9020	
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Thr	Gly	Leu	Gly	Gly	Leu	Leu	Thr	Val	Ile	Leu	Tyr	Met	Tyr	Val	
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Ser	Lys	Tyr	Glu	Val	Leu	Ile	Gly	Leu	Cys	Ile	Ser	Ile	Val	Thr	
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Leu	Val	Ser	Ile	Val	Asp	Ala	Ala	Thr	Asp	Leu	Gln	Asp	Thr	Cys	
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Ile	Tyr	Arg	Lys	Asn	Arg	His	Lys	Gln	Leu	Asn	Thr	Tyr	Thr	Asp	
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Leu	Gly	Phe	Ala	Val	Val	Tyr	Thr	Gln	Asn	Asp	Arg	Gly	Arg	Val	
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Cys	Asp	His	Arg	Glu	Ser	Ser	Arg	Thr	Leu	Lys	Arg	Val	Phe	Lys	
	9100					9105					9110				
gga	att	cgt	ata	atg	tct	gtt	ata	ccc	ccg	gtg	tta	tat	ata	gtt	103231
Gly	Ile	Arg	Ile	Met	Ser	Val	Ile	Pro	Pro	Val	Leu	Tyr	Ile	Val	
	9115					9120					9125				
acc	cca	tta	atg	tgg	gca	atc	tca	cat	ata	att	aaa	tta	aat	cat	103276
Thr	Pro	Leu	Met	Trp	Ala	Ile	Ser	His	Ile	Ile	Lys	Leu	Asn	His	
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Phe	Ile	Lys	Leu	Thr	Gln	Val	Thr	Leu	Ala	Val	Ser	Ile	Gly	Gly	
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His	Ile	Ile	Ala	Phe	Gly	Leu	Gln	Gly	Phe	Ala	Val	Leu	Tyr	Gln	
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Glu	Lys	Lys	Asn	Leu	Trp	Val	Ile	Val	Leu	Tyr	Thr	Thr	Thr	Ser	
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Val	Thr	Gly	Ile	Ala	Val	Thr	Phe	Ala	Gly	Ile	Ser	Trp	Gly	Ala	
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Ile	Ile	Ile	Leu	Thr	Ser	Thr	Val	Ala	Ala	Gly	Leu	Thr	Cys	Ile	
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Gln	Met	Met	Arg	Leu	Ser	Val	Lys	Pro	Ile	Asp	Cys	Phe	Met	Ala	
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Ser	His	Ile	Thr	Lys	Val	Tyr	His	Val	Cys	Val	Tyr	Ile	Ile	Ile	

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Asn Leu Cys Tyr Leu Cys Gly	Thr Tyr Val Ser		
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Met	Lys Arg Ile Gln Ile	Asn Leu Ile Leu Thr	
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Ile Ala Cys Ile Gln	Leu Ser Thr Glu Ser	Gln Pro Thr Pro Val	
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Ser Ile Thr Glu Leu	Tyr Thr Ser Ala Ala	Thr Arg Lys Pro Asp	
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ccc gcc gtc gcg ccc	acc tcg gcc gct tcc	cga aag ccc gat ccc	103939
Pro Ala Val Ala Pro	Thr Ser Ala Ala Ser	Arg Lys Pro Asp Pro	
9305	9310	9315	
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Ala Val Ala Pro Thr	Ser Ala Ala Ser Arg	Lys Pro Asp Pro Ala	
9320	9325	9330	
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Val Ala Pro Thr Ser	Ala Ala Ser Arg Lys	Pro Asp Pro Ala Val	
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Ala Pro Thr Ser Ala	Ala Thr Arg Lys Pro	Asp Pro Ala Val Ala	
9350	9355	9360	
ccc acc tcg gcc gct	tcc cga aag ccc gat	ccc gcc gtc gcg ccc	104119
Pro Thr Ser Ala Ala	Ser Arg Lys Pro Asp	Pro Ala Val Ala Pro	
9365	9370	9375	
acc tcg gcc gct acc	cga aag ccc gat ccc	gcc gtc gcg ccc acc	104164
Thr Ser Ala Ala Thr	Arg Lys Pro Asp Pro	Ala Val Ala Pro Thr	
9380	9385	9390	
tcg gcc gct tcc cga	aag ccc gat ccc gca	gcc aac acc caa cat	104209
Ser Ala Ala Ser Arg	Lys Pro Asp Pro Ala	Ala Asn Thr Gln His	
9395	9400	9405	
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Ser Gln Pro Pro Phe	Leu Tyr Glu Asn Ile	Gln Cys Val His Gly	
9410	9415	9420	
gga ata caa tcc ata	ccc tat ttt cac aca	ttt atc atg cct tgt	104299
Gly Ile Gln Ser Ile	Pro Tyr Phe His Thr	Phe Ile Met Pro Cys	
9425	9430	9435	

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Tyr Met Arg Leu Thr Thr Gly Gln Gln Ala Ala Phe Lys Gln Gln	
9440 9445 9450	
caa aaa aca tat gaa caa tat tct tta gat ccg gaa ggt tca aat	104389
Gln Lys Thr Tyr Glu Gln Tyr Ser Leu Asp Pro Glu Gly Ser Asn	
9455 9460 9465	
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Ile Thr Arg Trp Lys Ser Leu Ile Arg Pro Asp Leu His Ile Glu	
9470 9475 9480	
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Val Trp Phe Thr Arg His Leu Ile Asp Pro His Arg Gln Leu Gly	
9485 9490 9495	
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Asn Ala Leu Ile Arg Met Pro Asp Leu Pro Val Met Leu Tyr Ser	
9500 9505 9510	
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cac gct aag gaa aat tat gta ata cca gat gtt aaa aca acg tct	104614
His Ala Lys Glu Asn Tyr Val Ile Pro Asp Val Lys Thr Thr Ser	
9530 9535 9540	
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Asp Phe Ser Val Thr Ile Leu Ser Met Asp Ala Thr Thr Glu Gly	
9545 9550 9555	
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Thr Tyr Ile Trp Arg Val Val Asn Thr Lys Thr Lys Asn Val Ile	
9560 9565 9570	
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Ser Glu His Ser Ile Thr Val Thr Thr Tyr Tyr Arg Pro Asn Ile	
9575 9580 9585	
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9590 9595 9600	
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Tyr Cys Asn Val Ser Lys Tyr Tyr Pro Pro His Ser Val Arg Val	
9605 9610 9615	
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Arg Trp Thr Ser Arg Phe Gly Asn Ile Gly Lys Asn Phe Ile Thr	
9620 9625 9630	
gat gca ata caa gaa tat gcc aat gga tta ttt agt tat gtt tcg	104929
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9635 9640 9645	

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Ala Val Arg Ile Pro	Gln Gln Lys Gln Met	Asp Tyr Pro Pro Pro	
9650	9655	9660	
gcc atc caa tgt aat	gtt tta tgg att cgg	gat ggc gtc tct aat	105019
Ala Ile Gln Cys Asn	Val Leu Trp Ile Arg	Asp Gly Val Ser Asn	
9665	9670	9675	
atg aaa tat tct gct	gtc gtt acc cct gac	gtc tat cca ttt ccc	105064
Met Lys Tyr Ser Ala	Val Val Thr Pro Asp	Val Tyr Pro Phe Pro	
9680	9685	9690	
aac gtg tct ata ggt	att att gat gga cac	ata gta tgt acg gca	105109
Asn Val Ser Ile Gly	Ile Ile Asp Gly His	Ile Val Cys Thr Ala	
9695	9700	9705	
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Lys Cys Val Pro Arg	Gly Val Val His Phe	Val Trp Trp Val Asn	
9710	9715	9720	
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Asp Ser Pro Ile Asn	His Glu Asn Ser Glu	Ile Thr Gly Val Cys	
9725	9730	9735	
gat caa aac aaa cgg	ttt gta aac atg caa	agt tct tgt cca aca	105244
Asp Gln Asn Lys Arg	Phe Val Asn Met Gln	Ser Ser Cys Pro Thr	
9740	9745	9750	
tcg gaa ctc gac gga	cct atc acc tat tcg	tgt cat cta gat ggt	105289
Ser Glu Leu Asp Gly	Pro Ile Thr Tyr Ser	Cys His Leu Asp Gly	
9755	9760	9765	
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Tyr Pro Lys Lys Phe	Pro Pro Phe Ser Ala	Val Tyr Thr Tyr Asp	
9770	9775	9780	
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Ala Ser Thr Tyr Ala	Thr Thr Phe Ser Val	Val Ala Val Ile Ile	
9785	9790	9795	
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9800	9805	9810	
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Ala Thr Leu Cys Ile	Arg Cys Cys Ser		
9815			
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Gly Val Thr Val Ile Leu Pro Gly His Leu Thr Ile Tyr Leu Phe	
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Tyr Gly Ala Pro Leu	Asn Pro His Ile Ile	Ser Asp Thr Leu Cys	
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Ile Ser Glu Thr Phe	Asp Ile His Ser Glu	Val Ile Gln Thr Leu	
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Met Val Thr Thr His	His Leu Asn Arg Lys	Gly Leu Ser Asp Asn	
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Gly Leu Cys Ile Thr	Glu Ala Thr Leu Cys	Lys Leu Val Lys Lys	
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Ser Val Gly Arg Gln	Glu Leu Thr Ser Leu	Tyr Ala His Tyr Glu	
10410	10415	10420	
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Arg Gln Val Leu Ala	Ala Tyr Arg Arg Leu	Tyr Trp Gly Tyr Gly	
10425	10430	10435	
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Cys Ser Pro Phe Trp	Tyr Ile Val Arg Phe	Gly Pro Ser Glu Lys	
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Thr Leu Val Leu Ala	Thr Arg Tyr Tyr Leu	Leu Gln Thr Asp Thr	
10455	10460	10465	
agt tac aat acg ttg	gaa acc ccc tta tat	gac tta cag gca att	117102
Ser Tyr Asn Thr Leu	Glu Thr Pro Leu Tyr	Asp Leu Gln Ala Ile	
10470	10475	10480	
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Lys Asp Leu Phe Leu	Thr Tyr Gln Val Pro	Ala Leu Pro Asn Cys	
10485	10490	10495	
agt ggg tac aat att	tcg gac ttg ttg tct	ttt gat aaa ctt tcc	117192
Ser Gly Tyr Asn Ile	Ser Asp Leu Leu Ser	Phe Asp Lys Leu Ser	
10500	10505	10510	
atg ttt tgt tgt tcc	tca aca tat aca cga	ggt ttg aca gcc aaa	117237
Met Phe Cys Cys Ser	Ser Thr Tyr Thr Arg	Gly Leu Thr Ala Lys	
10515	10520	10525	
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Asn Ala Leu Ser Tyr	Ile Leu Gln Arg Ile	His Thr Asp Thr Thr	
10530	10535	10540	
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Glu Ile His Ala Val	Ser Glu Tyr Ile Thr	Asn Asp Arg Lys Gly	
10545	10550	10555	

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Leu Lys Val Pro Asp	Arg Glu Phe Val Asp	Tyr Ile Tyr Leu Ala	
10560	10565	10570	
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His Phe Glu Cys Phe	Asn Arg Lys Gln Ile	Ala Asp His Leu Gln	
10575	10580	10585	
gcg gtt aca tac tca	gat ttt gtg aat aaa	ccg gtc ctc tta aaa	117462
Ala Val Thr Tyr Ser	Asp Phe Val Asn Lys	Pro Val Leu Leu Lys	
10590	10595	10600	
tca tcc aac ctg gga	aaa aga gct act gct	aat ttt ttt aat cat	117507
Ser Ser Asn Leu Gly	Lys Arg Ala Thr Ala	Asn Phe Phe Asn His	
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gta cgt tct cgt ctc	aac atg cgt gac tat	ata aaa aag aac gta	117552
Val Arg Ser Arg Leu	Asn Met Arg Asp Tyr	Ile Lys Lys Asn Val	
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Ile Cys Asp Val Thr	Glu Leu Gly Pro Glu	Ile Gly His Lys Tyr	
10635	10640	10645	
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Thr Ile Thr Lys Thr	Tyr Thr Leu Ser Leu	Thr Tyr Ala Ala Lys	
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cct agc aag ttt ata	ggc gta tgt gac cta	gct aca acg cta act	117687
Pro Ser Lys Phe Ile	Gly Val Cys Asp Leu	Ala Thr Thr Leu Thr	
10665	10670	10675	
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Arg Arg Val Glu Asn	Ile Glu Lys Gln Phe	Ser Pro Tyr Gly Trp	
10680	10685	10690	
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Ser Ser Thr Ile Pro	Ser Asn Pro Pro Gly	Phe Asp Glu Leu Ser	
10695	10700	10705	
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Asp Thr Ser Pro Gly	Ile Thr Lys Leu Leu	Leu Phe Phe Ser Ala	
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Ala Thr Gly Ile Ala	Thr His Asp Val Ser	Ile Leu Ser Tyr Lys	
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Thr	Leu	Pro	His	Glu	Ala	Arg	Leu	Ile	Ala	Glu	Asp	Leu	Lys	Gln	
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Phe	Tyr	Lys	Thr	Ala	Cys	Pro	Glu	Pro	Thr	Val	Glu	Val	Leu	Asp	
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Asp	Asp	Asn	Leu	Leu	Asp	Ile	Thr	Ser	His	Ser	Asp	Ile	Asp	Phe	
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aca	gag	gat	gta	tggt	ttt	ttt	gat	aca	cag	aca	acg	tct	gaa	gtc	118632
Thr	Glu	Asp	Val	Trp	Phe	Phe	Asp	Thr	Gln	Thr	Thr	Ser	Glu	Val	

10980					10985					10990					
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His	Thr	His	Ala	Asp	Val	Ser	Asn	Asn	Glu	Asn	Leu	His	Glu	Thr	
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cta	ccc	tgt	aac	tgt	aaa	gag	aaa	ata	ggg	ttc	agg	gta	tgc	gta	118722
Leu	Pro	Cys	Asn	Cys	Lys	Glu	Lys	Ile	Gly	Phe	Arg	Val	Cys	Val	
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cca	atc	cca	aac	ccc	tat	gcg	tta	gtg	ggg	tct	tcc	act	tta	aag	118767
Pro	Ile	Pro	Asn	Pro	Tyr	Ala	Leu	Val	Gly	Ser	Ser	Thr	Leu	Lys	
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ggg	ttt	gca	caa	ata	tta	cag	caa	gcg	gtg	ttg	ctg	gaa	cgg	gaa	118812
Gly	Phe	Ala	Gln	Ile	Leu	Gln	Gln	Ala	Val	Leu	Leu	Glu	Arg	Glu	
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Phe	Val	Glu	Tyr	Ile	Gly	Pro	Tyr	Leu	Arg	Asp	Phe	Ser	Phe	Ile	
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gat	act	ggg	gtt	tat	agc	cac	gga	cat	agt	tta	aga	ctg	cct	ttt	118902
Asp	Thr	Gly	Val	Tyr	Ser	His	Gly	His	Ser	Leu	Arg	Leu	Pro	Phe	
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ttc	tcc	aaa	gta	aca	acc	aca	ggg	acg	gcg	gtt	gga	caa	cta	ctc	118947
Phe	Ser	Lys	Val	Thr	Thr	Thr	Gly	Thr	Ala	Val	Gly	Gln	Leu	Leu	
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Pro	Phe	Tyr	Val	Val	Pro	Glu	Gln	Cys	Ile	Asp	Ile	Leu	Ala	Phe	
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gtg	aca	tca	cat	aga	aac	ccg	gca	aac	ttt	cat	ttt	cat	tca	aga	119037
Val	Thr	Ser	His	Arg	Asn	Pro	Ala	Asn	Phe	His	Phe	His	Ser	Arg	
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ccg	cag	tcg	aac	gtt	cca	gtg	caa	ttt	att	tta	cat	aac	ctt	ggg	119082
Pro	Gln	Ser	Asn	Val	Pro	Val	Gln	Phe	Ile	Leu	His	Asn	Leu	Gly	
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Gly	Glu	Tyr	Ala	Glu	Phe	Phe	Glu	Arg	Lys	Val	Ala	Arg	Asn	Lys	
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caa	ata	ttt	agc	tcc	ccg	caa	ata	tct	tta	aca	aag	gct	cta	aaa	119172
Gln	Ile	Phe	Ser	Ser	Pro	Gln	Ile	Ser	Leu	Thr	Lys	Ala	Leu	Lys	
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Glu	Arg	Gly	Val	Thr	Cys	Leu	Asp	Ala	Phe	Thr	Leu	Glu	Ala	Phe	
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gtc	gac	agc	aca	ata	tta	gaa	tct	att	gtg	gag	cat	att	gct	gtt	119262
Val	Asp	Ser	Thr	Ile	Leu	Glu	Ser	Ile	Val	Glu	His	Ile	Ala	Val	
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cat ttc ccc ggg cgt	gat cgc gaa tat acc	tta aca tca tca aag	119307
His Phe Pro Gly Arg	Asp Arg Glu Tyr Thr	Leu Thr Ser Ser Lys	
11205	11210	11215	
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Cys Ile Ala Ile Lys	Arg Asp Trp Val Leu	Phe Gln Leu Ile Cys	
11220	11225	11230	
gga aca aaa ggg ttc	act tgt ctt cga tat	ccc cat cgc gga gga	119397
Gly Thr Lys Gly Phe	Thr Cys Leu Arg Tyr	Pro His Arg Gly Gly	
11235	11240	11245	
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Arg Thr Ala Pro Arg	Thr Phe Val Ser Leu	Arg Val Asp His His	
11250	11255	11260	
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Asn Arg Leu Cys Ile	Ser Leu Ala Gln Gln	Cys Phe Ala Thr Lys	
11265	11270	11275	
tgc gat agc aat cgc	atg cat aca atc ttt	act cta gaa gta cct	119532
Cys Asp Ser Asn Arg	Met His Thr Ile Phe	Thr Leu Glu Val Pro	
11280	11285	11290	
aat tat cca aat tta	act tcg agt taa caccaaccgt	gtgatactac	119579
Asn Tyr Pro Asn Leu	Thr Ser Ser		
11295			
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	Met Gln	Ala Leu Gly Ile	
	11300		
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Lys Thr Glu His Phe	Ile Ile Met Cys Leu	Leu Ser Gly His Ala	
11305	11310	11315	
gtt ttt acc cta tgg	tat acc gct cgt gta	aag ttt gaa cat gag	119718
Val Phe Thr Leu Trp	Tyr Thr Ala Arg Val	Lys Phe Glu His Glu	
11320	11325	11330	
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Cys Val Tyr Ala Thr	Thr Val Ile Asn Gly	Gly Pro Val Val Trp	
11335	11340	11345	
ggg tct tat aac aac	tct ctt ata tat gta	acg ttt gta aac cac	119808
Gly Ser Tyr Asn Asn	Ser Leu Ile Tyr Val	Thr Phe Val Asn His	
11350	11355	11360	
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Ser Thr Phe Leu Asp	Gly Leu Ser Gly Tyr	Asp Tyr Ser Cys Arg	
11365	11370	11375	
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Glu Asn Leu Leu Ser	Gly Asp Thr Met Val	Lys Thr Ala Ile Ser	
11380	11385	11390	

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Thr	Pro	Leu	His	Asp	Lys	Ile	Arg	Ile	Val	Leu	Gly	Thr	Arg	Asn	
11395					11400					11405					
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Cys	His	Ala	Tyr	Phe	Trp	Cys	Val	Gln	Leu	Lys	Met	Ile	Phe	Phe	
11410					11415					11420					
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Ala	Trp	Phe	Val	Tyr	Gly	Met	Tyr	Leu	Gln	Phe	Arg	Arg	Ile	Arg	
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Arg	Met	Phe	Gly	Pro	Phe	Arg	Ser	Ser	Cys	Glu	Leu	Ile	Ser	Pro	
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11455					11460					11465					
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11470					11475					11480					
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Val	Ser	Met	Arg	Arg	Asp	Gly	Met	Ser	Lys	Val	Phe	Asn	Ala	Asp	
11485					11490					11495					
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Pro	Ile	Ser	Phe	Leu	Tyr	Met	His	Lys	Gly	Val	Thr	Leu	Leu	Met	
11500					11505					11510					
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Leu	Leu	Glu	Val	Ile	Ala	His	Ile	Ser	Ser	Gly	Cys	Ile	Val	Leu	
11515					11520					11525					
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Leu	Thr	Leu	Gly	Val	Ala	Tyr	Thr	Pro	Cys	Ala	Leu	Leu	Tyr	Pro	
11530					11535					11540					
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Thr	Tyr	Ile	Arg	Ile	Leu	Ala	Trp	Val	Val	Val	Cys	Thr	Leu	Ala	
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Ile	Val	Glu	Leu	Ile	Ser	Tyr	Val	Arg	Pro	Lys	Pro	Thr	Lys	Asp	
11560					11565					11570					
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Asn	His	Leu	Asn	His	Ile	Asn	Thr	Gly	Gly	Ile	Arg	Gly	Ile	Cys	
11575					11580					11585					
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Thr	Thr	Cys	Cys	Ala	Thr	Val	Met	Ser	Gly	Leu	Ala	Ile	Lys	Cys	
11590					11595					11600					
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Phe	Tyr	Ile	Val	Ile	Phe	Ala	Ile	Ala	Val	Val	Ile	Phe	Met	His	
11605					11610					11615					
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Tyr	Glu	Gln	Arg	Val	Gln	Val	Ser	Leu	Phe	Gly	Glu	Ser	Glu	Asn	
11620					11625					11630					
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Ser	Gln	Lys	His												
11635															
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Ser	Thr	Ile	Cys	Glu		Asp	Phe	Met	Asn	Leu		Leu	Pro	Asp	Glu
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tcg	gat	gac	ttt	gca		ttg	gaa	gtc	acc	gat		tgg	gca	aat	gat
Ser	Asp	Asp	Phe	Ala		Leu	Glu	Val	Thr	Asp		Trp	Ala	Asn	Asp
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Ala	Ile	Gly	Ser	Thr		Pro	Gly	Glu	Asp	Ser		Thr	Thr	Ser	Arg
					11685					11690					11695
gtg	tat	gtg	gag	cgt		act	gca	gat	aca	gca		tat	aat	cca	cg
Val	Tyr	Val	Glu	Arg		Thr	Ala	Asp	Thr	Ala		Tyr	Asn	Pro	Arg
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tcc	aaa	cga	agg	cac		gga	agg	cgt	gaa	agc		tac	cac	cac	aat
Ser	Lys	Arg	Arg	His		Gly	Arg	Arg	Glu	Ser		Tyr	His	His	Asn
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ccg	aaa	act	ttg	gtt		gtt	gta	tta	ccc	gat		tca	aac	cat	cat
Pro	Lys	Thr	Leu	Val		Val	Val	Leu	Pro	Asp		Ser	Asn	His	His
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gga	aga	gac	gtg	gag		act	gga	tat	gca	cgc		atc	gaa	cg	gga
Gly	Arg	Asp	Val	Glu		Thr	Gly	Tyr	Ala	Arg		Ile	Glu	Arg	Gly
					11745					11750					11755
cga	cga	tca	tcc	aga		tct	tat	aac	act	caa		agt	tca	aga	aaa
Arg	Arg	Ser	Ser	Arg		Ser	Tyr	Asn	Thr	Gln		Ser	Ser	Arg	Lys
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cgt	gat	cga	tcc	ctg		tca	aat	cga	aga	cgg		cgt	cct	aca	acg
Arg	Asp	Arg	Ser	Leu		Ser	Asn	Arg	Arg	Arg		Arg	Pro	Thr	Thr
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cct	gca	atg	acc	acg		gga	gaa	aga	aat	gat		cag	aca	cat	gac
Pro	Ala	Met	Thr	Thr		Gly	Glu	Arg	Asn	Asp		Gln	Thr	His	Asp
					11790					11795					11800

tcg tac agg ttg cga	ttt tcc aag aga gac	gcc cgc cga gag cgt	121274
Ser Tyr Arg Leu Arg	Phe Ser Lys Arg Asp	Ala Arg Arg Glu Arg	
11805	11810	11815	
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Ile Arg Lys Glu Tyr	Asp Ile Pro Val Asp	Arg Ile Thr Gly Arg	
11820	11825	11830	
gct att gaa gtc gtc	tcc acc gcg gga gcc	agc gtg acc att gac	121364
Ala Ile Glu Val Val	Ser Thr Ala Gly Ala	Ser Val Thr Ile Asp	
11835	11840	11845	
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Ser Val Arg His Leu	Asp Glu Thr Ile Glu	Lys Leu Val Val Arg	
11850	11855	11860	
tat gcc aca ata caa	gag ggt gat tca tgg	gct tcc ggt gga tgt	121454
Tyr Ala Thr Ile Gln	Glu Gly Asp Ser Trp	Ala Ser Gly Gly Cys	
11865	11870	11875	
ttt ccg ggg ata aaa	caa aac aca tct tgg	ccg gag ttg atg ttg	121499
Phe Pro Gly Ile Lys	Gln Asn Thr Ser Trp	Pro Glu Leu Met Leu	
11880	11885	11890	
tac gga cat gaa ctt	tat cgt acc ttt gag	tca tat aaa atg gac	121544
Tyr Gly His Glu Leu	Tyr Arg Thr Phe Glu	Ser Tyr Lys Met Asp	
11895	11900	11905	
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Ser Arg Ile Ala Arg	Ala Leu Arg Glu Arg	Val Ile Arg Gly Glu	
11910	11915	11920	
tct ttg att gaa gcg	ttg gag tct gcg gat	gaa ctg tta acg tgg	121634
Ser Leu Ile Glu Ala	Leu Glu Ser Ala Asp	Glu Leu Leu Thr Trp	
11925	11930	11935	
att aaa atg tta gcg	gca aaa aac ttg ccc	atc tac aca aat aat	121679
Ile Lys Met Leu Ala	Ala Lys Asn Leu Pro	Ile Tyr Thr Asn Asn	
11940	11945	11950	
ccc att gtt gca acc	tcg aag tca ctt ttg	gag aat tta aag tta	121724
Pro Ile Val Ala Thr	Ser Lys Ser Leu Leu	Glu Asn Leu Lys Leu	
11955	11960	11965	
aag ctg ggg cct ttt	gta aga tgt ctt ctt	cta aac agg gac aac	121769
Lys Leu Gly Pro Phe	Val Arg Cys Leu Leu	Leu Asn Arg Asp Asn	
11970	11975	11980	
gat ttg ggg tct cgt	act ctc ccc gaa ctg	ttg cgc cag caa cgt	121814
Asp Leu Gly Ser Arg	Thr Leu Pro Glu Leu	Leu Arg Gln Gln Arg	
11985	11990	11995	
ttt agt gat atc acg	tgt att act act tat	atg ttt gtt atg att	121859
Phe Ser Asp Ile Thr	Cys Ile Thr Thr Tyr	Met Phe Val Met Ile	
12000	12005	12010	
gcc cgc att gct aat	ata gtt gtc cgt ggc	tct aaa ttt gtg gaa	121904

Ala Arg Ile Ala Asn	Ile Val Val Arg Gly	Ser Lys Phe Val Glu	
12015	12020	12025	
tat gat gat atc agt	tgt aac gtt caa gtg	tta caa gaa tat aca	121949
Tyr Asp Asp Ile Ser	Cys Asn Val Gln Val	Leu Gln Glu Tyr Thr	
12030	12035	12040	
ccc ggg tca tgt ctg	gcc ggt gtt tta gag	gcc cta atc acc cac	121994
Pro Gly Ser Cys Leu	Ala Gly Val Leu Glu	Ala Leu Ile Thr His	
12045	12050	12055	
caa cgc gag tgt ggt	cgt gtt gaa tgt acc	ctc tca act tgg gcc	122039
Gln Arg Glu Cys Gly	Arg Val Glu Cys Thr	Leu Ser Thr Trp Ala	
12060	12065	12070	
ggg cat ctt tct gac	gcc cgt cca tac ggt	aaa tat ttt aag tgt	122084
Gly His Leu Ser Asp	Ala Arg Pro Tyr Gly	Lys Tyr Phe Lys Cys	
12075	12080	12085	
agt acc ttt aac tgc	taa aataaaaaat acctttttca	tgcttgtcaa	122132
Ser Thr Phe Asn Cys			
12090			
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Met Asp Thr Thr Gly	Ala Ser Glu Ser Ser	Gln Pro Ile Arg	
12095	12100		
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Val Asn Leu Lys Pro Asp	Pro Leu Ala Ser Phe	Thr Gln Val Ile	
12105	12110	12115	
ccg cca ctg gcg ttg	gaa aca acg tgg aca	tgc cct gcc aac tca	122569
Pro Pro Leu Ala Leu Glu	Thr Thr Trp Thr Cys	Pro Ala Asn Ser	
12120	12125	12130	
cat gca ccg acg cca	tcc cct ctg tac ggt	gtt aag agg tta tgt	122614
His Ala Pro Thr Pro Ser	Pro Leu Tyr Gly Val	Lys Arg Leu Cys	
12135	12140	12145	
gct ctt cga gca aca	tgc ggc cgg gct gat	gat tta cac gct ttt	122659
Ala Leu Arg Ala Thr Cys	Gly Arg Ala Asp Asp	Leu His Ala Phe	
12150	12155	12160	
ttg att gga ctt gga	cgt cga gat aaa cca	tct gaa tcc cca atg	122704
Leu Ile Gly Leu Gly Arg	Arg Asp Lys Pro Ser	Glu Ser Pro Met	
12165	12170	12175	

tat	gtt	gac	cta	cag	ccg	ttt	tgc	agc	ctc	cta	aat	tcc	caa	cga	122749
Tyr	Val	Asp	Leu	Gln	Pro	Phe	Cys	Ser	Leu	Leu	Asn	Ser	Gln	Arg	
12180					12185					12190					
ctg	tta	ccg	gaa	atg	gct	aat	tat	aac	acc	cta	tgc	gat	gca	ccc	122794
Leu	Leu	Pro	Glu	Met	Ala	Asn	Tyr	Asn	Thr	Leu	Cys	Asp	Ala	Pro	
12195					12200					12205					
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Phe	Ser	Ala	Ala	Thr	Gln	Gln	Met	Met	Leu	Glu	Ser	Gly	Gln	Leu	
12210					12215					12220					
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Gly	Val	His	Leu	Ala	Ala	Ile	Gly	Tyr	His	Cys	His	Cys	Lys	Ser	
12225					12230					12235					
ccc	ttc	tcg	gcg	gag	tgt	tgg	acc	ggc	gca	tcc	gag	gca	tac	gat	122929
Pro	Phe	Ser	Ala	Glu	Cys	Trp	Thr	Gly	Ala	Ser	Glu	Ala	Tyr	Asp	
12240					12245					12250					
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His	Val	Val	Cys	Gly	Gly	Lys	Ala	Arg	Ala	Ala	Val	Gly	Gly	Leu	
12255					12260					12265					
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aacagagatc	tctgttactt	aaaccgtgtg	tgccggagaaa	tgtaccata	gatggagcca										123387
gtaaatgcaa	gcccgtagca	cattcatacc	caagcgttgt	ggatcgcttt	tccttcatcg										123447
ccaaaataat	aatgtcctt	gcacctccag	gcgtcattgc	acgccctatt	agacgggcaa										123507
ggctaagacg	ttcgccgggt	ttgctatatt	tgccaataat	tacatagggt	ttggtacagg										123567
taatgtgtaa	cgttcctccg	cctggcaggt	ctacagttct	ccccgcaagc	actcgtaata										123627
aacatcgct	ttctgacgcg	ggattttcct	cgccgggtggc	gtttaaactg	ggacgcacca										123687
gagtggagcc	cataataaat	gcgggaacat	gcccatatgc	aagtgtctca	gaaattacat										123747
gcattttatg	attttacggg	ggtgggttac	gataatagct	attaaacaaa	caccaataa										123807
agcatttttt	gtagaacctt	tattgggtaa	cacagtcttt	tcacgtgaca	ggcaatgtat										123867
aaataacgta	cggatgcact	taagatgtat	cgcacataaa	tttatataag	ctgtagcaaa										123927
gtataagcaa	atcctgttaa	tatttatattt	ttgggatccg	ca atg	tcc agg gta										123981

<400> 52

Met Phe Cys Thr Ser Pro Ala Thr Arg Gly Asp Ser Ser Glu Ser Lys
1 5 10 15

Pro Gly Ala Ser Val Asp Val Asn Gly Lys Met Glu Tyr Gly Ser Ala
20 25 30

Pro Gly Pro Leu Asn Gly Arg Asp Thr Ser Arg Gly Pro Gly Ala Phe
35 40 45

Cys Thr Pro Gly Trp Glu Ile His Pro Ala Arg Leu Val Glu Asp Ile
50 55 60

Asn Arg Val Phe Leu Cys Ile Ala Gln Ser Ser Gly Arg Val Thr Arg
65 70 75 80

Asp Ser Arg Arg Leu Arg Arg Ile Cys Leu Asp Phe Tyr Leu Met Gly
85 90 95

Arg Thr Arg Gln Arg Pro Thr Leu Ala Cys Trp Glu Glu Leu Leu Gln
100 105 110

Leu Gln Pro Thr Gln Thr Gln Cys Leu Arg Ala Thr Leu Met Glu Val
115 120 125

Ser His Arg Pro Pro Arg Gly Glu Asp Gly Phe Ile Glu Ala Pro Asn
130 135 140

Val Pro Leu His Arg Ser Ala Leu Glu Cys Asp Val Ser Asp Asp Gly
145 150 155 160

Gly Glu Asp Asp Ser Asp Asp Asp Gly Ser Thr Pro Ser Asp Val Ile
165 170 175

Glu Phe Arg Asp Ser Asp Ala Glu Ser Ser Asp Gly Glu Asp Phe Ile
180 185 190

Val Glu Glu Glu Ser Glu Glu Ser Thr Asp Ser Cys Glu Pro Asp Gly
195 200 205

Val Pro Gly Asp Cys Tyr Arg Asp Gly Asp Gly Cys Asn Thr Pro Ser
210 215 220

Pro Lys Arg Pro Gln Arg Ala Ile Glu Arg Tyr Ala Gly Ala Glu Thr
 225 230 235 240

Ala Glu Tyr Thr Ala Ala Lys Ala Leu Thr Ala Leu Gly Glu Gly Gly
 245 250 255

Val Asp Trp Lys Arg Arg Arg His Glu Ala Pro Arg Arg His Asp Ile
 260 265 270

Pro Pro Pro His Gly Val
 275

<210> 53
 <211> 180
 <212> PRT
 <213> Varicella zoster

<400> 53

Met Asn Leu Cys Gly Ser Arg Gly Glu His Pro Gly Gly Glu Tyr Ala
 1 5 10 15

Gly Leu Tyr Cys Thr Arg His Asp Thr Pro Ala His Gln Ala Leu Met
 20 25 30

Asn Asp Ala Glu Arg Tyr Phe Ala Ala Ala Leu Cys Ala Ile Ser Thr
 35 40 45

Glu Ala Tyr Glu Ala Phe Ile His Ser Pro Ser Glu Arg Pro Cys Ala
 50 55 60

Ser Leu Trp Gly Arg Ala Lys Asp Ala Phe Gly Arg Met Cys Gly Glu
 65 70 75 80

Leu Ala Ala Asp Arg Gln Arg Pro Pro Ser Val Pro Pro Ile Arg Arg
 85 90 95

Ala Val Leu Ser Leu Leu Arg Glu Gln Cys Met Pro Asp Pro Gln Ser
 100 105 110

His Leu Glu Leu Ser Glu Arg Leu Ile Leu Met Ala Tyr Trp Cys Cys
 115 120 125

Leu Gly His Ala Gly Leu Pro Thr Ile Gly Leu Ser Pro Asp Asn Lys

130 135 140
 Cys Ile Arg Ala Glu Leu Tyr Asp Arg Pro Gly Gly Ile Cys His Arg
 145 150 155 160
 Leu Phe Asp Ala Tyr Leu Gly Cys Gly Ser Leu Gly Val Pro Arg Thr
 165 170 175
 Tyr Glu Arg Ser
 180

<210> 54
 <211> 102
 <212> PRT
 <213> Varicella zoster

<400> 54

Met Ala Gly Gln Asn Thr Met Glu Gly Glu Ala Val Ala Leu Leu Met
 1 5 10 15

Glu Ala Val Val Thr Pro Arg Ala Gln Pro Asn Asn Thr Thr Ile Thr
 20 25 30

Ala Ile Gln Pro Ser Arg Ser Ala Glu Lys Cys Tyr Tyr Ser Asp Ser
 35 40 45

Glu Asn Glu Thr Ala Asp Glu Phe Leu Arg Arg Ile Gly Lys Tyr Gln
 50 55 60

His Lys Ile Tyr His Arg Lys Lys Phe Cys Tyr Ile Thr Leu Ile Ile
 65 70 75 80

Val Phe Val Phe Ala Met Thr Gly Ala Ala Phe Ala Leu Gly Tyr Ile
 85 90 95

Thr Ser Gln Phe Val Gly
 100

<210> 55
 <211> 1310
 <212> PRT
 <213> Varicella zoster

<400> 55

Met Asp Thr Pro Pro Met Gln Arg Ser Thr Pro Gln Arg Ala Gly Ser
1 5 10 15
Pro Asp Thr Leu Glu Leu Met Asp Leu Leu Asp Ala Ala Ala Ala Ala
20 25 30
Ala Glu His Arg Ala Arg Val Val Thr Ser Ser Gln Pro Asp Asp Leu
35 40 45
Leu Phe Gly Glu Asn Gly Val Met Val Gly Arg Glu His Glu Ile Val
50 55 60
Ser Ile Pro Ser Val Ser Gly Leu Gln Pro Glu Pro Arg Thr Glu Asp
65 70 75 80
Val Gly Glu Glu Leu Thr Gln Asp Asp Tyr Val Cys Glu Asp Gly Gln
85 90 95
Asp Leu Met Gly Ser Pro Val Ile Pro Leu Ala Glu Val Phe His Thr
100 105 110
Arg Phe Ser Glu Ala Gly Ala Arg Glu Pro Thr Gly Ala Asp Arg Ser
115 120 125
Leu Glu Thr Val Ser Leu Gly Thr Lys Leu Ala Arg Ser Pro Lys Pro
130 135 140
Pro Met Asn Asp Gly Glu Thr Gly Arg Gly Thr Thr Pro Pro Phe Pro
145 150 155 160
Gln Ala Phe Ser Pro Val Ser Pro Ala Ser Pro Val Gly Asp Ala Ala
165 170 175
Gly Asn Asp Gln Arg Glu Asp Gln Arg Ser Ile Pro Arg Gln Thr Thr
180 185 190
Arg Gly Asn Ser Pro Gly Leu Pro Ser Val Val His Arg Asp Arg Gln
195 200 205
Thr Gln Ser Ile Ser Gly Lys Lys Pro Gly Asp Glu Gln Ala Gly His
210 215 220
Ala His Ala Ser Gly Asp Gly Val Val Leu Gln Lys Thr Gln Arg Pro

225					230						235				240
Ala	Gln	Gly	Lys	Ser	Pro	Lys	Lys	Lys	Thr	Leu	Lys	Val	Lys	Val	Pro
				245					250					255	
Leu	Pro	Ala	Arg	Lys	Pro	Gly	Gly	Pro	Val	Pro	Gly	Pro	Val	Glu	Gln
			260					265					270		
Leu	Tyr	His	Val	Leu	Ser	Asp	Ser	Val	Pro	Ala	Lys	Gly	Ala	Lys	Ala
		275					280					285			
Asp	Leu	Pro	Phe	Glu	Thr	Asp	Asp	Thr	Arg	Pro	Arg	Lys	His	Asp	Ala
	290					295					300				
Arg	Gly	Ile	Thr	Pro	Arg	Val	Pro	Gly	Arg	Ser	Ser	Gly	Gly	Lys	Pro
305					310					315					320
Arg	Ala	Phe	Leu	Ala	Leu	Pro	Gly	Arg	Ser	His	Ala	Pro	Asp	Pro	Ile
				325					330					335	
Glu	Asp	Asp	Ser	Pro	Val	Glu	Lys	Lys	Pro	Lys	Ser	Arg	Glu	Phe	Val
			340					345					350		
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Trp	Gly	Ser	Ser	Ser	Glu	Asp	Glu
		355					360					365			
Asp	Asp	Glu	Pro	Arg	Arg	Val	Ser	Val	Gly	Ser	Glu	Thr	Thr	Gly	Ser
	370					375					380				
Arg	Ser	Gly	Arg	Glu	His	Ala	Pro	Ser	Pro	Ser	Asn	Ser	Asp	Asp	Ser
385					390					395					400
Asp	Ser	Asn	Asp	Gly	Gly	Ser	Thr	Lys	Gln	Asn	Ile	Gln	Pro	Gly	Tyr
				405					410					415	
Arg	Ser	Ile	Ser	Gly	Pro	Asp	Pro	Arg	Ile	Arg	Lys	Thr	Lys	Arg	Leu
			420					425					430		
Ala	Gly	Glu	Pro	Gly	Arg	Gln	Arg	Gln	Lys	Ser	Phe	Ser	Leu	Pro	Arg
		435					440					445			
Ser	Arg	Thr	Pro	Ile	Ile	Pro	Pro	Val	Ser	Gly	Pro	Leu	Met	Met	Pro
	450					455					460				

Asp Gly Ser Pro Trp Pro Gly Ser Ala Pro Leu Pro Ser Asn Arg Val
 465 470 475 480

Arg Phe Gly Pro Ser Gly Glu Thr Arg Glu Gly His Trp Glu Asp Glu
 485 490 495

Ala Val Arg Ala Ala Arg Ala Arg Tyr Glu Ala Ser Thr Glu Pro Val
 500 505 510

Pro Leu Tyr Val Pro Glu Leu Gly Asp Pro Ala Arg Gln Tyr Arg Ala
 515 520 525

Leu Ile Asn Leu Ile Tyr Cys Pro Asp Arg Asp Pro Ile Ala Trp Leu
 530 535 540

Gln Asn Pro Lys Leu Thr Gly Val Asn Ser Ala Leu Asn Gln Phe Tyr
 545 550 555 560

Gln Lys Leu Leu Pro Pro Gly Arg Ala Gly Thr Ala Val Thr Gly Ser
 565 570 575

Val Ala Ser Pro Val Pro His Val Gly Glu Ala Met Ala Thr Gly Glu
 580 585 590

Ala Leu Trp Ala Leu Pro His Ala Ala Ala Ala Val Ala Met Ser Arg
 595 600 605

Arg Tyr Asp Arg Ala Gln Lys His Phe Ile Leu Gln Ser Leu Arg Arg
 610 615 620

Ala Phe Ala Ser Met Ala Tyr Pro Glu Ala Thr Gly Ser Ser Pro Ala
 625 630 635 640

Ala Arg Ile Ser Arg Gly His Pro Ser Pro Thr Thr Pro Ala Thr Gln
 645 650 655

Ala Pro Asp Pro Gln Pro Ser Ala Ala Ala Arg Ser Leu Ser Val Cys
 660 665 670

Pro Pro Asp Asp Arg Leu Arg Thr Pro Arg Lys Arg Lys Ser Gln Pro
 675 680 685

Val	Glu	Ser	Arg	Ser	Leu	Leu	Asp	Lys	Ile	Arg	Glu	Thr	Pro	Val	Ala	
690						695					700					
Asp	Ala	Arg	Val	Ala	Asp	Asp	His	Val	Val	Ser	Lys	Ala	Lys	Arg	Arg	
705					710					715					720	
Val	Ser	Glu	Pro	Val	Thr	Ile	Thr	Ser	Gly	Pro	Val	Val	Asp	Pro	Pro	
				725					730					735		
Ala	Val	Ile	Thr	Met	Pro	Leu	Asp	Gly	Pro	Ala	Pro	Asn	Gly	Gly	Phe	
			740					745					750			
Arg	Arg	Ile	Pro	Arg	Gly	Ala	Leu	His	Thr	Pro	Val	Pro	Ser	Asp	Gln	
		755					760					765				
Ala	Arg	Lys	Ala	Tyr	Cys	Thr	Pro	Glu	Thr	Ile	Ala	Arg	Leu	Val	Asp	
	770					775					780					
Asp	Pro	Leu	Phe	Pro	Thr	Ala	Trp	Arg	Pro	Ala	Leu	Ser	Phe	Asp	Pro	
785					790					795					800	
Gly	Ala	Leu	Ala	Glu	Ile	Ala	Ala	Arg	Arg	Pro	Gly	Gly	Gly	Asp	Arg	
				805					810					815		
Arg	Phe	Gly	Pro	Pro	Ser	Gly	Val	Glu	Ala	Leu	Arg	Arg	Arg	Cys	Ala	
			820					825					830			
Trp	Met	Arg	Gln	Ile	Pro	Asp	Pro	Glu	Asp	Val	Arg	Leu	Leu	Ile	Ile	
		835					840					845				
Tyr	Asp	Pro	Leu	Pro	Gly	Glu	Asp	Ile	Asn	Gly	Pro	Leu	Glu	Ser	Thr	
	850					855					860					
Leu	Ala	Thr	Asp	Pro	Gly	Pro	Ser	Trp	Ser	Pro	Ser	Arg	Gly	Gly	Leu	
865					870					875					880	
Ser	Val	Val	Leu	Ala	Ala	Leu	Ser	Asn	Arg	Leu	Cys	Leu	Pro	Ser	Thr	
				885					890					895		
His	Ala	Trp	Ala	Gly	Asn	Trp	Thr	Gly	Pro	Pro	Asp	Val	Ser	Ala	Leu	
			900					905					910			

Asn Ala Arg Gly Val Leu Leu Leu Ser Thr Arg Asp Leu Ala Phe Ala
 915 920 925

Gly Ala Val Glu Tyr Leu Gly Ser Arg Leu Ala Ser Ala Arg Arg Arg
 930 935 940

Leu Leu Val Leu Asp Ala Val Ala Leu Glu Arg Trp Pro Arg Asp Gly
 945 950 955 960

Pro Ala Leu Ser Gln Tyr His Val Tyr Val Arg Ala Pro Ala Arg Pro
 965 970 975

Asp Ala Gln Ala Val Val Arg Trp Pro Asp Ser Ala Val Thr Glu Gly
 980 985 990

Leu Ala Arg Ala Val Phe Ala Ser Ser Arg Thr Phe Gly Pro Ala Ser
 995 1000 1005

Phe Ala Arg Ile Glu Thr Ala Phe Ala Asn Leu Tyr Pro Gly Glu
 1010 1015 1020

Gln Pro Leu Cys Leu Cys Arg Gly Gly Asn Val Ala Tyr Thr Val
 1025 1030 1035

Cys Thr Arg Ala Gly Pro Lys Thr Arg Val Pro Leu Ser Pro Arg
 1040 1045 1050

Glu Tyr Arg Gln Tyr Val Leu Pro Gly Phe Asp Gly Cys Lys Asp
 1055 1060 1065

Leu Ala Arg Gln Ser Arg Gly Leu Gly Leu Gly Ala Ala Asp Phe
 1070 1075 1080

Val Asp Glu Ala Ala His Ser His Arg Ala Ala Asn Arg Trp Gly
 1085 1090 1095

Leu Gly Ala Ala Leu Arg Pro Val Phe Leu Pro Glu Gly Arg Arg
 1100 1105 1110

Pro Gly Ala Ala Gly Pro Glu Ala Gly Asp Val Pro Thr Trp Ala
 1115 1120 1125

Arg Val Phe Cys Arg His Ala Leu Leu Glu Pro Asp Pro Ala Ala

1130		1135		1140
Glu Pro Leu Val Leu Pro Pro Val Ala Gly Arg Ser Val Ala Leu				
1145		1150		1155
Tyr Ala Ser Ala Asp Glu Ala Arg Asn Ala Leu Pro Pro Ile Pro				
1160		1165		1170
Arg Val Met Trp Pro Pro Gly Phe Gly Ala Ala Glu Thr Val Leu				
1175		1180		1185
Glu Gly Ser Asp Gly Thr Arg Phe Val Phe Gly His His Gly Gly				
1190		1195		1200
Ser Glu Arg Pro Ser Glu Thr Gln Ala Gly Arg Gln Arg Arg Thr				
1205		1210		1215
Ala Asp Asp Arg Glu His Ala Leu Glu Leu Asp Asp Trp Glu Val				
1220		1225		1230
Gly Cys Glu Asp Ala Trp Asp Ser Glu Glu Gly Gly Gly Asp Asp				
1235		1240		1245
Gly Asp Ala Pro Gly Ser Ser Phe Gly Val Ser Ile Val Ser Val				
1250		1255		1260
Ala Pro Gly Val Leu Arg Asp Arg Arg Val Gly Leu Arg Pro Ala				
1265		1270		1275
Val Lys Val Glu Leu Leu Ser Ser Ser Ser Ser Ser Glu Asp Glu				
1280		1285		1290
Asp Asp Val Trp Gly Gly Arg Gly Gly Arg Ser Pro Pro Gln Ser				
1295		1300		1305
Arg Gly				
1310				

<210> 56
 <211> 467
 <212> PRT
 <213> Varicella zoster

<400> 56

Met	Asp	Thr	Ile	Leu	Ala	Gly	Gly	Ser	Gly	Thr	Ser	Asp	Ala	Ser	Asp	
1				5					10					15		
Asn	Thr	Cys	Thr	Ile	Cys	Met	Ser	Thr	Val	Ser	Asp	Leu	Gly	Lys	Thr	
			20					25					30			
Met	Pro	Cys	Leu	His	Asp	Phe	Cys	Phe	Val	Cys	Ile	Arg	Ala	Trp	Thr	
		35					40					45				
Ser	Thr	Ser	Val	Gln	Cys	Pro	Leu	Cys	Arg	Cys	Pro	Val	Gln	Ser	Ile	
	50					55					60					
Leu	His	Lys	Ile	Val	Ser	Asp	Thr	Ser	Tyr	Lys	Glu	Tyr	Glu	Val	His	
65					70					75					80	
Pro	Ser	Asp	Asp	Asp	Gly	Phe	Ser	Glu	Pro	Ser	Phe	Glu	Asp	Ser	Ile	
				85					90					95		
Asp	Ile	Leu	Pro	Gly	Asp	Val	Ile	Asp	Leu	Leu	Pro	Pro	Ser	Pro	Gly	
			100					105					110			
Pro	Ser	Arg	Glu	Ser	Ile	Gln	Gln	Pro	Thr	Ser	Arg	Ser	Ser	Arg	Glu	
		115					120					125				
Pro	Ile	Gln	Ser	Pro	Asn	Pro	Gly	Pro	Leu	Gln	Ser	Ser	Ala	Arg	Glu	
	130					135					140					
Pro	Thr	Ala	Glu	Ser	Pro	Ser	Asp	Ser	Gln	Gln	Asp	Ser	Ile	Gln	Pro	
145					150				155						160	
Pro	Thr	Arg	Asp	Ser	Ser	Pro	Gly	Val	Thr	Lys	Thr	Cys	Ser	Thr	Ala	
				165					170					175		
Ser	Phe	Leu	Arg	Lys	Val	Phe	Phe	Lys	Asp	Gln	Pro	Ala	Val	Arg	Ser	
		180						185					190			
Ala	Thr	Pro	Val	Val	Tyr	Gly	Ser	Ile	Glu	Ser	Ala	Gln	Gln	Pro	Arg	
		195					200					205				
Thr	Gly	Gly	Gln	Asp	Tyr	Arg	Asp	Arg	Pro	Val	Ser	Val	Gly	Ile	Asn	
	210					215					220					

Gln Asp Pro Arg Thr Met Asp Arg Leu Pro Phe Arg Ala Thr Asp Arg
 225 230 235 240

Gly Thr Glu Gly Asn Ala Arg Phe Pro Cys Tyr Met Gln Pro Leu Leu
 245 250 255

Gly Trp Leu Asp Asp Gln Leu Ala Glu Leu Tyr Gln Pro Glu Ile Val
 260 265 270

Glu Pro Thr Lys Met Leu Ile Leu Asn Tyr Ile Gly Ile Tyr Gly Arg
 275 280 285

Asp Glu Ala Gly Leu Lys Thr Ser Leu Arg Cys Leu Leu His Asp Ser
 290 295 300

Thr Gly Pro Phe Val Thr Asn Met Leu Phe Leu Leu Asp Arg Cys Thr
 305 310 315 320

Asp Pro Thr Arg Leu Thr Met Gln Thr Trp Thr Trp Lys Asp Thr Ala
 325 330 335

Ile Gln Leu Ile Thr Gly Pro Ile Val Arg Pro Glu Thr Thr Ser Thr
 340 345 350

Gly Glu Thr Ser Arg Gly Asp Glu Arg Asp Thr Arg Leu Val Asn Thr
 355 360 365

Pro Gln Lys Val Arg Leu Phe Ser Val Leu Pro Gly Ile Lys Pro Gly
 370 375 380

Ser Ala Arg Gly Ala Lys Arg Arg Leu Phe His Thr Gly Arg Asp Val
 385 390 395 400

Lys Arg Cys Leu Thr Ile Asp Leu Thr Ser Glu Ser Asp Ser Ala Cys
 405 410 415

Lys Gly Ser Lys Thr Arg Lys Val Ala Ser Pro Gln Gly Glu Ser Asn
 420 425 430

Thr Pro Ser Thr Ser Gly Ser Thr Ser Gly Ser Leu Lys His Leu Thr
 435 440 445

Lys Lys Ser Ser Ala Gly Lys Ala Gly Lys Gly Ile Pro Asn Lys Met

450
 Lys Lys Ser
 465

 <210> 57
 <211> 305
 <212> PRT
 <213> Varicella zoster

 <400> 57

 Met Asp Val Ser Gly Glu Pro Thr Val Cys Ser Asn Ala Tyr Ala Asn
 1 5 10 15

 Glu Met Lys Leu Ser Asp Ser Lys Asp Ile Tyr Val Leu Ala His Pro
 20 25 30

 Val Thr Lys Lys Thr Arg Lys Arg Pro Arg Gly Leu Pro Leu Gly Val
 35 40 45

 Lys Leu Asp Pro Pro Thr Phe Lys Leu Asn Asn Met Ser His His Tyr
 50 55 60

 Asp Thr Glu Thr Phe Thr Pro Val Ser Ser Gln Leu Asp Ser Val Glu
 65 70 75 80

 Val Phe Ser Lys Phe Asn Ile Ser Pro Glu Trp Tyr Asp Leu Leu Ser
 85 90 95

 Asp Glu Leu Lys Glu Pro Tyr Ala Lys Gly Ile Phe Leu Glu Tyr Asn
 100 105 110

 Arg Leu Leu Asn Ser Gly Glu Glu Ile Leu Pro Ser Thr Gly Asp Ile
 115 120 125

 Phe Ala Trp Thr Arg Phe Cys Gly Pro Gln Ser Ile Arg Val Val Ile
 130 135 140

 Ile Gly Gln Asp Pro Tyr Pro Thr Ala Gly His Ala His Gly Leu Ala
 145 150 155 160

 Phe Ser Val Lys Arg Gly Ile Thr Pro Pro Ser Ser Leu Lys Asn Ile
 165 170 175

Phe Ala Ala Leu Met Glu Ser Tyr Pro Asn Met Thr Pro Pro Thr His
180 185 190

Gly Cys Leu Glu Ser Trp Ala Arg Gln Gly Val Leu Leu Leu Asn Thr
195 200 205

Thr Leu Thr Val Arg Arg Gly Thr Pro Gly Ser His Val Tyr Leu Gly
210 215 220

Trp Gly Arg Leu Val Gln Arg Val Leu Gln Arg Leu Cys Glu Asn Arg
225 230 235 240

Thr Gly Leu Val Phe Met Leu Trp Gly Ala His Ala Gln Lys Thr Thr
245 250 255

Gln Pro Asn Ser Arg Cys His Leu Val Leu Thr His Ala His Pro Ser
260 265 270

Pro Leu Ser Arg Val Pro Phe Arg Asn Cys Arg His Phe Val Gln Ala
275 280 285

Asn Glu Tyr Phe Thr Arg Lys Gly Glu Pro Glu Ile Asp Trp Ser Val
290 295 300

Ile
305

<210> 58
<211> 71
<212> PRT
<213> Varicella zoster

<400> 58

Met Asp Val Arg Glu Arg Asn Val Phe Gly Asn Ala Ser Val Ala Thr
1 5 10 15

Pro Gly Glu His Gln Lys Phe Val Arg Glu Leu Ile Leu Ser Gly His
20 25 30

Asn Asn Val Val Leu Gln Thr Tyr Thr Gly Lys Trp Ser Asp Cys Arg
35 40 45

Lys His Gly Lys Ser Val Met Tyr Asn Thr Gly Glu Ala Arg His Pro

50	55	60
Thr Cys Lys Ala His Gln Arg		
65	70	
<210> 59		
<211> 331		
<212> PRT		
<213> Varicella zoster		
<400> 59		
Met Gln Arg Ile Arg Pro Tyr Trp Ile Lys Phe Glu Gln Thr Gly Gly		
1	5	10 15
Ala Gly Met Ala Asp Gly Met Ser Gly Ile Asn Ile Pro Ser Ile Leu		
	20	25 30
Gly Cys Ser Val Thr Ile Asp Asn Leu Leu Thr Arg Ala Glu Glu Gly		
	35	40 45
Leu Asp Val Ser Asp Val Ile Glu Asp Leu Arg Ile Gln Ala Ile Pro		
	50	55 60
Arg Phe Val Cys Glu Ala Arg Glu Val Thr Gly Leu Lys Pro Arg Phe		
65	70	75 80
Leu Ala Asn Ser Val Val Ser Leu Arg Val Lys Pro Glu His Gln Glu		
	85	90 95
Thr Val Leu Val Val Leu Asn Gly Asp Ser Ser Glu Val Ser Cys Asp		
	100	105 110
Arg Tyr Tyr Met Glu Cys Val Thr Gln Pro Ala Phe Arg Gly Phe Ile		
	115	120 125
Phe Ser Val Leu Thr Ala Val Glu Asp Arg Val Tyr Thr Val Gly Val		
	130	135 140
Pro Pro Arg Leu Leu Ile Tyr Arg Met Thr Leu Phe Arg Pro Asp Asn		
145	150	155 160
Val Leu Asp Phe Thr Leu Cys Val Ile Leu Met Tyr Leu Glu Gly Ile		
	165	170 175

Gly Pro Ser Gly Ala Ser Pro Ser Leu Phe Val Gln Leu Ser Val Tyr
180 185 190

Leu Arg Arg Val Glu Cys Gln Ile Gly Pro Leu Glu Lys Met Arg Arg
195 200 205

Phe Leu Tyr Glu Gly Val Leu Trp Leu Leu Asn Thr Leu Met Tyr Val
210 215 220

Val Asp Asn Asn Pro Phe Thr Lys Thr Arg Val Leu Pro His Tyr Met
225 230 235 240

Phe Val Lys Leu Leu Asn Pro Gln Pro Gly Thr Ala Pro Asn Ile Ile
245 250 255

Lys Ala Ile Tyr Ser Cys Gly Val Gly Gln Arg Phe Asp Leu Pro His
260 265 270

Gly Thr Pro Pro Cys Pro Asp Gly Val Val Gln Val Pro Pro Gly Leu
275 280 285

Leu Asn Gly Pro Leu Arg Asp Ser Glu Tyr Gln Lys Ser Val Tyr Phe
290 295 300

Trp Trp Leu Asn Arg Thr Met Val Thr Pro Lys Asn Val Gln Leu Phe
305 310 315 320

Glu Thr Tyr Lys Asn Ser Pro Arg Val Val Lys
325 330

<210> 60
<211> 541
<212> PRT
<213> Varicella zoster

<400> 60

Met Glu Phe Pro Tyr His Ser Thr Val Ser Tyr Asn Gly Val Thr Phe
1 5 10 15

Tyr Phe Asn Glu Arg Ala Thr Arg Ala Tyr Phe Ile Cys Gly Gly Cys
20 25 30

Leu Ile Ser Ile Pro Arg Lys His Gly Gly Glu Ile Ala Lys Phe Gly

35	40	45															
His	Val	Val	Arg	Gly	Val	Gly	Pro	Gly	Asp	Arg	Ser	Val	Ala	Ser	Tyr		
50						55					60						
Val	Arg	Ser	Glu	Leu	Asn	Arg	Thr	Gly	Lys	Thr	Trp	Ala	Val	Ser	Ser		
65					70					75					80		
Asn	Asn	Asn	Cys	Val	Phe	Leu	Asp	Arg	Val	Ala	Leu	Leu	Ala	Ala	Gly		
				85					90					95			
Ser	Gly	Ala	Val	Asp	Arg	Asp	Leu	Cys	Gly	Thr	Phe	Asp	Val	Glu	Val		
			100					105					110				
Glu	Asp	Pro	Thr	Leu	Ala	Asp	Tyr	Leu	Val	Ser	Leu	Pro	Val	Thr	His		
		115					120					125					
Leu	Thr	Leu	Val	Ala	Gly	Val	Asp	Val	Thr	Arg	Glu	Asn	Lys	Leu	Lys		
	130					135					140						
Leu	Phe	Pro	Thr	Pro	Thr	Ala	Ile	Asn	Thr	Thr	Asn	Gly	Phe	Met	Tyr		
145						150				155					160		
Val	Pro	Asn	Glu	Ala	Ser	Phe	Ser	Leu	Val	Tyr	Met	Arg	Met	Leu	Glu		
				165					170					175			
Leu	Pro	Glu	Ser	Leu	Gln	Glu	Leu	Val	Ser	Gly	Leu	Phe	Asp	Gly	Thr		
			180					185					190				
Pro	Glu	Ile	Arg	Asp	Ala	Leu	Asn	Gly	Ser	Asn	Asp	Asp	Glu	Lys	Thr		
		195					200					205					
Ser	Ile	Ile	Val	Ser	Arg	Arg	Ala	Ala	Asp	Val	Val	Thr	Glu	Asp	Val		
	210					215					220						
Lys	Ala	Asp	Asp	Val	Pro	Ile	Ser	Gly	Glu	Pro	Tyr	Ser	Glu	Lys	Gln		
225					230					235					240		
Pro	Arg	Arg	Arg	Lys	Lys	Ser	Asp	His	Ile	Thr	Leu	Ser	Asn	Phe	Val		
				245					250					255			
Gln	Ile	Arg	Thr	Ile	Pro	Arg	Val	Met	Asp	Ile	Trp	Asp	Pro	Arg	His		
			260					265					270				

Lys Ala Thr Thr His Cys Ile Arg Ala Leu Ser Cys Ala Val Phe Phe
 275 280 285

Ala Asp Glu Val Ile Phe Lys Ala Arg Lys Trp Pro Gly Leu Glu Asp
 290 295 300

Glu Leu Asn Glu Ala Arg Glu Thr Ile Tyr Thr Ala Val Val Ala Val
 305 310 315 320

Tyr Gly Glu Arg Gly Glu Leu Pro Phe Phe Gly His Ala Tyr Gly Arg
 325 330 335

Asp Leu Thr Ser Cys Gln Arg Phe Val Ile Val Gln Tyr Ile Leu Ser
 340 345 350

Arg Trp Glu Ala Phe Asn Cys Tyr Ala Val Ile Glu Asp Leu Thr Arg
 355 360 365

Ser Tyr Val Asn Ala Leu Pro Ser Asp Asp Asp Thr Asp Gln Val Ala
 370 375 380

Gln Asp Leu Ile Arg Thr Ile Val Asp Thr Ala Asn Ser Leu Leu Arg
 385 390 395 400

Glu Val Gly Phe Ile Gly Thr Leu Ala Glu Thr Leu Leu Phe Leu Pro
 405 410 415

Leu Pro Gln Leu Pro Cys Tyr Lys Glu Thr Ser His Leu Ala Lys Lys
 420 425 430

Glu Gly Val Arg Ile Leu Arg Leu Ala Lys Thr Gly Val Gly Leu Ser
 435 440 445

Asp Thr Val Pro Val Asp Val Ser Val Thr Glu Arg His Glu Tyr Glu
 450 455 460

Ile Ser Arg Tyr Leu Asp Thr Leu Tyr Ser Gly Asp Pro Cys Tyr Asn
 465 470 475 480

Gly Ala Val Arg Leu Cys Arg Leu Leu Gly Ser Ser Ile Pro Ile Ala
 485 490 495

Leu Tyr Tyr Asn Thr Ile Ser Gly Asn Ala Phe Glu Pro Tyr Phe Ala
500 505 510

Gly Arg Arg Tyr Ile Ala Tyr Leu Gly Ala Leu Phe Phe Gly Arg Val
515 520 525

His Gln Thr Pro Phe Gly Asp Gly Lys Lys Thr Gln Arg
530 535 540

<210> 61
<211> 258
<212> PRT
<213> Varicella zoster

<400> 61

Met Ser Ala Ser Arg Ile Arg Ala Lys Cys Phe Arg Leu Gly Gln Arg
1 5 10 15

Cys His Thr Arg Phe Tyr Asp Val Leu Lys Lys Asp Ile Asp Asn Val
20 25 30

Arg Arg Gly Phe Ala Asp Ala Phe Asn Pro Arg Leu Ala Lys Leu Leu
35 40 45

Ser Pro Leu Ser His Val Asp Val Gln Arg Ala Val Arg Ile Ser Met
50 55 60

Ser Phe Glu Val Asn Leu Gly Arg Arg Arg Pro Asp Cys Val Cys Ile
65 70 75 80

Ile Gln Thr Glu Ser Ser Gly Ala Gly Lys Thr Val Cys Phe Ile Val
85 90 95

Glu Leu Lys Ser Cys Arg Phe Ser Ala Asn Ile His Thr Pro Thr Lys
100 105 110

Tyr His Gln Phe Cys Glu Gly Met Arg Gln Leu Arg Asp Thr Met Ala
115 120 125

Leu Ile Lys Glu Thr Thr Pro Thr Gly Ser Asp Glu Ile Met Val Thr
130 135 140

Pro Leu Leu Val Phe Val Ser Gln Arg Gly Leu Asn Leu Leu Gln Val

145 150 155 160

Thr Arg Leu Pro Pro Lys Val Ile His Gly Asn Leu Val Met Leu Ala
165 170 175

Ser His Leu Glu Asn Val Ala Glu Tyr Thr Pro Pro Ile Arg Ser Val
180 185 190

Arg Glu Arg Arg Arg Leu Cys Lys Lys Lys Ile His Val Cys Ser Leu
195 200 205

Ala Lys Lys Arg Ala Lys Ser Cys His Arg Ser Ala Leu Thr Lys Phe
210 215 220

Glu Glu Asn Ala Ala Cys Gly Val Asp Leu Pro Leu Arg Arg Pro Ser
225 230 235 240

Leu Gly Ala Cys Gly Gly Ile Leu Gln Ser Ile Thr Gly Met Phe Ser
245 250 255

His Gly

<210> 62
<211> 579
<212> PRT
<213> Varicella zoster

<400> 62

Met Thr Ala Arg Tyr Gly Phe Gly Ser Ile Ser Phe Pro Asn Lys Cys
1 5 10 15

Gly Ile Phe Leu Ser Thr Thr Lys Asn Phe Ile Ala Pro Asn Phe Pro
20 25 30

Ile His Tyr Trp Thr Ala Pro Ala Phe Glu Leu Arg Gly Arg Met Asn
35 40 45

Pro Asp Leu Glu Lys Asn Thr Leu Thr Leu Lys Asn Ala Ala Ala Val
50 55 60

Ala Ala Leu Asp Asn Leu Arg Gly Glu Thr Ile Thr Leu Pro Thr Glu
65 70 75 80

Ile	Asp	Arg	Arg	Leu	Lys	Pro	Leu	Glu	Glu	Gln	Leu	Thr	Arg	Met	Ala	
				85					90					95		
Lys	Val	Leu	Asp	Ser	Leu	Glu	Thr	Ala	Ala	Ala	Glu	Ala	Glu	Glu	Ala	
			100					105					110			
Asp	Ala	Gln	Ser	Glu	Glu	Cys	Thr	Arg	Thr	Glu	Ile	Ile	Arg	Asn	Glu	
		115					120					125				
Ser	Ile	His	Pro	Glu	Val	Gln	Ile	Ala	Lys	Asn	Asp	Ala	Pro	Leu	Gln	
	130					135					140					
Tyr	Asp	Thr	Asn	Phe	Gln	Val	Asp	Phe	Ile	Thr	Leu	Val	Tyr	Leu	Gly	
145					150					155					160	
Arg	Ala	Arg	Gly	Asn	Asn	Ser	Pro	Gly	Ile	Val	Phe	Gly	Pro	Trp	Tyr	
				165					170					175		
Arg	Thr	Leu	Gln	Glu	Arg	Leu	Val	Leu	Asp	Arg	Pro	Val	Ala	Ala	Arg	
			180					185					190			
Gly	Val	Asp	Cys	Lys	Asp	Gly	Arg	Ile	Ser	Arg	Thr	Phe	Met	Asn	Thr	
		195					200					205				
Thr	Val	Thr	Cys	Leu	Gln	Ser	Ala	Gly	Arg	Met	Tyr	Val	Gly	Asp	Arg	
	210					215					220					
Ala	Tyr	Ser	Ala	Phe	Glu	Cys	Ala	Val	Leu	Cys	Leu	Tyr	Leu	Met	Tyr	
225					230				235					240		
Arg	Thr	Ser	Asn	Ser	Val	His	Glu	Pro	Gln	Val	Ser	Ser	Phe	Gly	Asn	
				245					250					255		
Leu	Ile	Glu	His	Leu	Pro	Glu	Tyr	Thr	Glu	Thr	Phe	Val	Asn	Tyr	Met	
			260					265					270			
Thr	Thr	His	Glu	Asn	Lys	Asn	Ser	Tyr	Gln	Phe	Cys	Tyr	Asp	Arg	Leu	
		275					280					285				
Pro	Arg	Asp	Gln	Phe	His	Ala	Arg	Gly	Gly	Arg	Tyr	Asp	Gln	Gly	Ala	
	290					295					300					

Leu Thr Ser His Ser Val Met Asp Ala Leu Ile Arg Leu Gln Val Leu
 305 310 315 320

Pro Pro Ala Pro Gly Gln Phe Asn Pro Gly Val Asn Asp Ile Ile Asp
 325 330 335

Arg Asn His Thr Ala Tyr Val Asp Lys Ile Gln Gln Ala Ala Ala Ala
 340 345 350

Tyr Leu Glu Arg Ala Gln Asn Val Phe Leu Met Glu Asp Gln Thr Leu
 355 360 365

Leu Arg Leu Thr Ile Asp Thr Ile Thr Ala Leu Leu Leu Leu Arg Arg
 370 375 380

Leu Leu Trp Asn Gly Asn Val Tyr Gly Asp Lys Leu Lys Asn Asn Phe
 385 390 395 400

Gln Leu Gly Leu Ile Val Ser Glu Ala Thr Gly Thr Pro Thr Asn Asn
 405 410 415

Val Ile Leu Arg Gly Ala Thr Gly Phe Asp Gly Lys Phe Lys Ser Gly
 420 425 430

Asn Asn Asn Phe Gln Phe Leu Cys Glu Arg Tyr Ile Ala Pro Leu Tyr
 435 440 445

Thr Leu Asn Arg Thr Thr Glu Leu Thr Glu Met Phe Pro Gly Leu Val
 450 455 460

Ala Leu Cys Leu Asp Ala His Thr Gln Leu Ser Arg Gly Ser Leu Gly
 465 470 475 480

Arg Thr Val Ile Asp Ile Ser Ser Gly Gln Tyr Gln Asp Arg Leu Ile
 485 490 495

Ser Leu Ile Ala Leu Glu Leu Glu His Arg Arg Gln Asn Val Thr Ser
 500 505 510

Leu Pro Ile Ala Ala Val Val Ser Ile His Asp Ser Val Met Leu Gln
 515 520 525

Tyr Glu Arg Gly Leu Gly Met Leu Met His Gln Pro Arg Val Arg Ala

530 535 540
 Ala Leu Glu Glu Ser Arg Arg Leu Ala Gln Phe Asn Val Asn Ser Asp
 545 550 555 560
 Tyr Asp Leu Leu Tyr Phe Val Cys Leu Gly Val Ile Pro Gln Phe Ala
 565 570 575
 Ser Thr Pro

 <210> 63
 <211> 605
 <212> PRT
 <213> Varicella zoster

 <400> 63
 Met Ala Ala Glu Ala Asp Glu Glu Asn Cys Glu Ala Leu Tyr Val Ala
 1 5 10 15
 Gly Tyr Leu Ala Leu Tyr Ser Lys Asp Glu Gly Glu Leu Asn Ile Thr
 20 25 30
 Pro Glu Ile Val Arg Ser Ala Leu Pro Pro Thr Ser Lys Ile Pro Ile
 35 40 45
 Asn Ile Asp His Arg Lys Asp Cys Val Val Gly Glu Val Ile Ala Ile
 50 55 60
 Ile Glu Asp Ile Arg Gly Pro Phe Phe Leu Gly Ile Val Arg Cys Pro
 65 70 75 80
 Gln Leu His Ala Val Leu Phe Glu Ala Ala His Ser Asn Phe Phe Gly
 85 90 95
 Asn Arg Asp Ser Val Leu Ser Pro Leu Glu Arg Ala Leu Tyr Leu Val
 100 105 110
 Thr Asn Tyr Leu Pro Ser Val Ser Leu Ser Ser Lys Arg Leu Ser Pro
 115 120 125
 Asn Glu Ile Pro Asp Gly Asn Phe Phe Thr His Val Ala Leu Cys Val
 130 135 140

Val Gly Arg Arg Val Gly Thr Val Val Asn Tyr Asp Cys Thr Pro Glu
145 150 155 160

Ser Ser Ile Glu Pro Phe Arg Val Leu Ser Met Glu Ser Lys Ala Arg
165 170 175

Leu Leu Ser Leu Val Lys Asp Tyr Ala Gly Leu Asn Lys Val Trp Lys
180 185 190

Val Ser Glu Asp Lys Leu Ala Lys Val Leu Leu Ser Thr Ala Val Asn
195 200 205

Asn Met Leu Leu Arg Asp Arg Trp Asp Val Val Ala Lys Arg Arg Arg
210 215 220

Glu Ala Gly Ile Met Gly His Val Tyr Leu Gln Ala Ser Thr Gly Tyr
225 230 235 240

Gly Leu Ala Arg Ile Thr Asn Val Asn Gly Val Glu Ser Lys Leu Pro
245 250 255

Asn Ala Gly Val Ile Asn Ala Thr Phe His Pro Gly Gly Pro Ile Tyr
260 265 270

Asp Leu Ala Leu Gly Val Gly Glu Ser Asn Glu Asp Cys Glu Lys Thr
275 280 285

Val Pro His Leu Lys Val Thr Gln Leu Cys Arg Asn Asp Ser Asp Met
290 295 300

Ala Ser Val Ala Gly Asn Ala Ser Asn Ile Ser Pro Gln Pro Pro Ser
305 310 315 320

Gly Val Pro Thr Gly Gly Glu Phe Val Leu Ile Pro Thr Ala Tyr Tyr
325 330 335

Ser Gln Leu Leu Thr Gly Gln Thr Lys Asn Pro Gln Val Ser Ile Gly
340 345 350

Ala Pro Asn Asn Gly Gln Tyr Ile Val Gly Pro Tyr Gly Ser Pro His
355 360 365

Pro Pro Ala Phe Pro Pro Asn Thr Gly Gly Tyr Gly Cys Pro Pro Gly
 370 375 380

His Phe Gly Gly Pro Tyr Gly Phe Pro Gly Tyr Pro Pro Pro Asn Arg
 385 390 395 400

Leu Glu Met Gln Met Ser Ala Phe Met Asn Ala Leu Ala Ala Glu Arg
 405 410 415

Gly Ile Asp Leu Gln Thr Pro Cys Val Asn Phe Pro Asp Lys Thr Asp
 420 425 430

Val Arg Arg Pro Gly Lys Arg Asp Phe Lys Ser Met Asp Gln Arg Glu
 435 440 445

Leu Asp Ser Phe Tyr Ser Gly Glu Ser Gln Met Asp Gly Glu Phe Pro
 450 455 460

Ser Asn Ile Tyr Phe Pro Gly Glu Pro Thr Tyr Ile Thr His Arg Arg
 465 470 475 480

Arg Arg Val Ser Pro Ser Tyr Trp Gln Arg Arg His Arg Val Ser Asn
 485 490 495

Gly Gln His Glu Glu Leu Ala Gly Val Val Ala Lys Leu Gln Gln Glu
 500 505 510

Val Thr Glu Leu Lys Ser Gln Asn Gly Thr Gln Met Pro Leu Ser His
 515 520 525

His Thr Asn Ile Pro Glu Gly Thr Arg Asp Pro Arg Ile Ser Ile Leu
 530 535 540

Leu Lys Gln Leu Gln Ser Val Ser Gly Leu Cys Ser Ser Gln Asn Thr
 545 550 555 560

Thr Ser Thr Pro His Thr Asp Thr Val Gly Gln Asp Val Asn Ala Val
 565 570 575

Glu Ala Ser Ser Lys Ala Pro Leu Ile Gln Gly Ser Thr Ala Asp Asp
 580 585 590

Ala Asp Met Phe Ala Asn Gln Met Met Val Gly Arg Cys

595 600 605

 <210> 64
 <211> 1194
 <212> PRT
 <213> Varicella zoster

 <400> 64

 Met Ala Ile Arg Thr Gly Phe Cys Asn Pro Phe Leu Thr Gln Ala Ser
 1 5 10 15

 Gly Ile Lys Tyr Asn Pro Arg Thr Gly Arg Gly Ser Asn Arg Glu Phe
 20 25 30

 Leu His Ser Tyr Lys Thr Thr Met Ser Ser Phe Gln Phe Leu Ala Pro
 35 40 45

 Lys Cys Leu Asp Glu Asp Val Pro Met Glu Glu Arg Lys Gly Val His
 50 55 60

 Val Gly Thr Leu Ser Arg Pro Pro Lys Val Tyr Cys Asn Gly Lys Glu
 65 70 75 80

 Val Pro Ile Leu Asp Phe Arg Cys Ser Ser Pro Trp Pro Arg Arg Val
 85 90 95

 Asn Ile Trp Gly Glu Ile Asp Phe Arg Gly Asp Lys Phe Asp Pro Arg
 100 105 110

 Phe Asn Thr Phe His Val Tyr Asp Ile Val Glu Thr Thr Glu Ala Ala
 115 120 125

 Ser Asn Gly Asp Val Ser Arg Phe Ala Thr Ala Thr Arg Pro Leu Gly
 130 135 140

 Thr Val Ile Thr Leu Leu Gly Met Ser Arg Cys Gly Lys Arg Val Ala
 145 150 155 160

 Val His Val Tyr Gly Ile Cys Gln Tyr Phe Tyr Ile Asn Lys Ala Glu
 165 170 175

 Val Asp Thr Ala Cys Gly Ile Arg Ser Gly Ser Glu Leu Ser Val Leu
 180 185 190

Leu Ala Glu Cys Leu Arg Ser Ser Met Ile Thr Gln Asn Asp Ala Thr
 195 200 205

Leu Asn Gly Asp Lys Asn Ala Phe His Gly Thr Ser Phe Lys Ser Ala
 210 215 220

Ser Pro Glu Ser Phe Arg Val Glu Val Ile Glu Arg Thr Asp Val Tyr
 225 230 235 240

Tyr Tyr Asp Thr Gln Pro Cys Ala Phe Tyr Arg Val Tyr Ser Pro Ser
 245 250 255

Ser Lys Phe Thr Asn Tyr Leu Cys Asp Asn Phe His Pro Glu Leu Lys
 260 265 270

Lys Tyr Glu Gly Arg Val Asp Ala Thr Thr Arg Phe Leu Met Asp Asn
 275 280 285

Pro Gly Phe Val Ser Phe Gly Trp Tyr Gln Leu Lys Pro Gly Val Asp
 290 295 300

Gly Glu Arg Val Arg Val Arg Pro Ala Ser Arg Gln Leu Thr Leu Ser
 305 310 315 320

Asp Val Glu Ile Asp Cys Met Ser Asp Asn Leu Gln Ala Ile Pro Asn
 325 330 335

Asp Asp Ser Trp Pro Asp Tyr Lys Leu Leu Cys Phe Asp Ile Glu Cys
 340 345 350

Lys Ser Gly Gly Ser Asn Glu Leu Ala Phe Pro Asp Ala Thr His Leu
 355 360 365

Glu Asp Leu Val Ile Gln Ile Ser Cys Leu Leu Tyr Ser Ile Pro Arg
 370 375 380

Gln Ser Leu Glu His Ile Leu Leu Phe Ser Leu Gly Ser Cys Asp Leu
 385 390 395 400

Pro Gln Arg Tyr Val Gln Glu Met Lys Asp Ala Gly Leu Pro Glu Pro
 405 410 415

Thr Val Leu Glu Phe Asp Ser Glu Phe Glu Leu Leu Ile Ala Phe Met
420 425 430

Thr Leu Val Lys Gln Tyr Ala Pro Glu Phe Ala Thr Gly Tyr Asn Ile
435 440 445

Val Asn Phe Asp Trp Ala Phe Ile Met Glu Lys Leu Asn Ser Ile Tyr
450 455 460

Ser Leu Lys Leu Asp Gly Tyr Gly Ser Ile Asn Arg Gly Gly Leu Phe
465 470 475 480

Lys Ile Trp Asp Val Gly Lys Ser Gly Phe Gln Arg Arg Ser Lys Val
485 490 495

Lys Ile Asn Gly Leu Ile Ser Leu Asp Met Tyr Ala Ile Ala Thr Glu
500 505 510

Lys Leu Lys Leu Ser Ser Tyr Lys Leu Asp Ser Val Ala Arg Glu Ala
515 520 525

Leu Asn Glu Ser Lys Arg Asp Leu Pro Tyr Lys Asp Ile Pro Gly Tyr
530 535 540

Tyr Ala Ser Gly Pro Asn Thr Arg Gly Ile Ile Gly Glu Tyr Cys Ile
545 550 555 560

Gln Asp Ser Ala Leu Val Gly Lys Leu Phe Phe Lys Tyr Leu Pro His
565 570 575

Leu Glu Leu Ser Ala Val Ala Arg Leu Ala Arg Ile Thr Leu Thr Lys
580 585 590

Ala Ile Tyr Asp Gly Gln Gln Val Arg Ile Tyr Thr Cys Leu Leu Gly
595 600 605

Leu Ala Ser Ser Arg Gly Phe Ile Leu Pro Asp Gly Gly Tyr Pro Ala
610 615 620

Thr Phe Glu Tyr Lys Asp Val Ile Pro Asp Val Gly Asp Val Glu Glu
625 630 635 640

Glu Met Asp Glu Asp Glu Ser Val Ser Pro Thr Gly Thr Ser Ser Gly

				645						650						655			
Arg	Asn	Val	Gly	Tyr	Lys	Gly	Ala	Arg	Val	Phe	Asp	Pro	Asp	Thr	Gly				
			660					665					670						
Phe	Tyr	Ile	Asp	Pro	Val	Val	Val	Leu	Asp	Phe	Ala	Ser	Leu	Tyr	Pro				
		675					680					685							
Ser	Ile	Ile	Gln	Ala	His	Asn	Leu	Cys	Phe	Thr	Thr	Leu	Thr	Leu	Asn				
	690					695					700								
Phe	Glu	Thr	Val	Lys	Arg	Leu	Asn	Pro	Ser	Asp	Tyr	Ala	Thr	Phe	Thr				
705					710					715					720				
Val	Gly	Gly	Lys	Arg	Leu	Phe	Phe	Val	Arg	Ser	Asn	Val	Arg	Glu	Ser				
				725					730					735					
Leu	Leu	Gly	Val	Leu	Leu	Lys	Asp	Trp	Leu	Ala	Met	Arg	Lys	Ala	Ile				
			740					745					750						
Arg	Ala	Arg	Ile	Pro	Gly	Ser	Ser	Ser	Asp	Glu	Ala	Val	Leu	Leu	Asp				
		755					760					765							
Lys	Gln	Gln	Ala	Ala	Ile	Lys	Val	Val	Cys	Asn	Ser	Val	Tyr	Gly	Phe				
	770					775					780								
Thr	Gly	Val	Ala	Gln	Gly	Phe	Leu	Pro	Cys	Leu	Tyr	Val	Ala	Ala	Thr				
785					790					795					800				
Val	Thr	Thr	Ile	Gly	Arg	Gln	Met	Leu	Leu	Ser	Thr	Arg	Asp	Tyr	Ile				
				805					810					815					
His	Asn	Asn	Trp	Ala	Ala	Phe	Glu	Arg	Phe	Ile	Thr	Ala	Phe	Pro	Asp				
			820					825					830						
Ile	Glu	Ser	Ser	Val	Leu	Ser	Gln	Lys	Ala	Tyr	Glu	Val	Lys	Val	Ile				
		835					840					845							
Tyr	Gly	Asp	Thr	Asp	Ser	Val	Phe	Ile	Arg	Phe	Lys	Gly	Val	Ser	Val				
	850					855					860								
Glu	Gly	Ile	Ala	Lys	Ile	Gly	Glu	Lys	Met	Ala	His	Ile	Ile	Ser	Thr				
865					870					875					880				

Ala Leu Phe Cys Pro Pro Ile Lys Leu Glu Cys Glu Lys Thr Phe Ile
885 890 895

Lys Leu Leu Leu Ile Thr Lys Lys Lys Tyr Ile Gly Val Ile Tyr Gly
900 905 910

Gly Lys Val Leu Met Lys Gly Val Asp Leu Val Arg Lys Asn Asn Cys
915 920 925

Gln Phe Ile Asn Asp Tyr Ala Arg Lys Leu Val Glu Leu Leu Leu Tyr
930 935 940

Asp Asp Thr Val Ser Arg Ala Ala Ala Glu Ala Ser Cys Val Ser Ile
945 950 955 960

Ala Glu Trp Asn Arg Arg Ala Met Pro Ser Gly Met Ala Gly Phe Gly
965 970 975

Arg Ile Ile Ala Asp Ala His Arg Gln Ile Thr Ser Pro Lys Leu Asp
980 985 990

Ile Asn Lys Phe Val Met Thr Ala Glu Leu Ser Arg Pro Pro Ser Ala
995 1000 1005

Tyr Ile Asn Arg Arg Leu Ala His Leu Thr Val Tyr Tyr Lys Leu
1010 1015 1020

Val Met Arg Gln Gly Gln Ile Pro Asn Val Arg Glu Arg Ile Pro
1025 1030 1035

Tyr Val Ile Val Ala Pro Thr Asp Glu Val Glu Ala Asp Ala Lys
1040 1045 1050

Ser Val Ala Leu Leu Arg Gly Asp Pro Leu Gln Asn Thr Ala Gly
1055 1060 1065

Lys Arg Cys Gly Glu Ala Lys Arg Lys Leu Ile Ile Ser Asp Leu
1070 1075 1080

Ala Glu Asp Pro Ile His Val Thr Ser His Gly Leu Ser Leu Asn
1085 1090 1095

Ile Asp Tyr Tyr Phe Ser His Leu Ile Gly Thr Ala Ser Val Thr
 1100 1105 1110

Phe Lys Ala Leu Phe Gly Asn Asp Thr Lys Leu Thr Glu Arg Leu
 1115 1120 1125

Leu Lys Arg Phe Ile Pro Glu Thr Arg Val Val Asn Val Lys Met
 1130 1135 1140

Leu Asn Arg Leu Gln Ala Ala Gly Phe Val Cys Ile His Ala Pro
 1145 1150 1155

Cys Trp Asp Asn Lys Met Asn Thr Glu Ala Glu Ile Thr Glu Glu
 1160 1165 1170

Glu Gln Ser His Gln Ile Met Arg Arg Val Phe Cys Ile Pro Lys
 1175 1180 1185

Ala Ile Leu His Gln Ser
 1190

<210> 65
 <211> 156
 <212> PRT
 <213> Varicella zoster

<400> 65

Met Tyr Glu Ser Glu Asn Ala Ser Glu His His Pro Glu Leu Glu Asp
 1 5 10 15

Val Phe Ser Glu Asn Thr Gly Asp Ser Asn Pro Ser Met Gly Ser Ser
 20 25 30

Asp Ser Thr Arg Ser Ile Ser Gly Met Arg Ala Arg Asp Leu Ile Thr
 35 40 45

Asp Thr Asp Val Asn Leu Leu Asn Ile Asp Ala Leu Glu Ser Lys Tyr
 50 55 60

Phe Pro Ala Asp Ser Thr Phe Thr Leu Ser Val Trp Phe Glu Asn Leu
 65 70 75 80

Ile Pro Pro Glu Ile Glu Ala Ile Leu Pro Thr Thr Asp Ala Gln Leu

	85		90		95
Asn Tyr Ile Ser Phe Thr Ser Arg Leu Ala Ser Val Leu Lys His Lys	100		105		110
Glu Ser Asn Asp Ser Glu Lys Ser Ala Tyr Val Val Pro Cys Glu His	115		120		125
Ser Ala Ser Val Thr Arg Arg Arg Glu Arg Phe Ala Gly Val Met Ala	130		135		140
Lys Phe Leu Asp Leu His Glu Ile Leu Lys Asp Ala	145		150		155
<210> 66					
<211> 269					
<212> PRT					
<213> Varicella zoster					
<400> 66					
Met Ser Arg Arg Thr Tyr Val Arg Ser Glu Arg Arg Arg Gly Cys Gly	1	5	10		15
Asp Asn Leu Leu Gln Arg Ile Arg Leu Val Val Pro Ser Ala Leu Gln	20		25		30
Cys Cys Asp Gly Asp Leu Pro Ile Phe Asp Pro Gln Arg Pro Pro Ala	35		40		45
Arg Cys Val Phe Gln Phe Asn Gly Glu Asp Asn Val Ser Glu Ala Phe	50		55		60
Pro Val Glu Tyr Ile Met Arg Leu Met Ala Asn Trp Ala Gln Val Asp	65		70		75
					80
Cys Asp Pro Tyr Ile Lys Ile Gln Asn Thr Gly Val Ser Val Leu Phe	85		90		95
Gln Gly Phe Phe Phe Arg Pro Thr Asn Ala Pro Val Ala Glu Val Ser	100		105		110
Ile Asp Ser Asn Asn Val Ile Leu Ser Ser Thr Leu Ser Thr Gly Ile	115		120		125

Asn Leu Ser Ala Leu Glu Ser Ile Lys Arg Gly Gly Gly Ile Asp Arg
 130 135 140

Arg Pro Leu Gln Ala Leu Met Trp Val Asn Cys Phe Val Arg Met Pro
 145 150 155 160

Tyr Val Gln Leu Ser Phe Arg Phe Met Gly Pro Glu Asp Pro Ser Arg
 165 170 175

Thr Ile Lys Leu Met Ala Arg Ala Thr Asp Ala Tyr Met Tyr Lys Glu
 180 185 190

Thr Gly Asn Asn Leu Asp Glu Tyr Ile Arg Trp Arg Pro Ser Phe Arg
 195 200 205

Ser Pro Pro Glu Asn Gly Ser Pro Asn Thr Ser Val Gln Met Gln Ser
 210 215 220

Asp Ile Lys Pro Ala Leu Pro Asp Thr Gln Thr Thr Arg Val Trp Lys
 225 230 235 240

Leu Ala Leu Pro Val Ala Asn Val Thr Tyr Ala Leu Phe Ile Val Ile
 245 250 255

Val Leu Val Val Val Leu Gly Ala Val Leu Phe Trp Lys
 260 265

<210> 67
 <211> 235
 <212> PRT
 <213> Varicella zoster

<400> 67

Met Thr Gln Pro Ala Ser Ser Arg Val Val Phe Asp Pro Ser Asn Pro
 1 5 10 15

Thr Thr Phe Ser Val Glu Ala Ile Ala Ala Tyr Thr Pro Val Ala Leu
 20 25 30

Ile Arg Leu Leu Asn Ala Ser Gly Pro Leu Gln Pro Gly His Arg Val
 35 40 45

Asp Ile Ala Asp Ala Arg Ser Ile Tyr Thr Val Gly Ala Ala Ala Ser

50		55		60												
Ala	Ala	Arg	Ala	Arg	Ala	Asn	His	Asn	Ala	Asn	Thr	Ile	Arg	Arg	Thr	
65					70					75					80	
Ala	Met	Phe	Ala	Glu	Thr	Asp	Pro	Met	Thr	Trp	Leu	Arg	Pro	Thr	Val	
				85					90					95		
Gly	Leu	Lys	Arg	Thr	Phe	Asn	Pro	Arg	Ile	Ile	Arg	Pro	Gln	Pro	Pro	
			100					105					110			
Asn	Pro	Ser	Met	Ser	Leu	Gly	Ile	Ser	Gly	Pro	Thr	Ile	Leu	Pro	Gln	
		115					120					125				
Lys	Thr	Gln	Ser	Ala	Asp	Gln	Ser	Ala	Leu	Gln	Gln	Pro	Ala	Ala	Leu	
	130					135						140				
Ala	Phe	Ser	Gly	Ser	Ser	Pro	Gln	His	Pro	Pro	Pro	Gln	Thr	Thr	Ser	
145					150					155					160	
Ala	Ser	Val	Gly	Gln	Gln	Gln	His	Val	Val	Ser	Gly	Ser	Ser	Gly	Gln	
				165					170					175		
Gln	Pro	Gln	Gln	Gly	Ala	Gln	Ser	Ser	Thr	Val	Gln	Pro	Thr	Thr	Gly	
			180					185					190			
Ser	Pro	Pro	Ala	Ala	Gln	Gly	Val	Pro	Gln	Ser	Thr	Pro	Pro	Pro	Thr	
		195					200					205				
Gln	Asn	Thr	Pro	Gln	Gly	Gly	Lys	Gly	Gln	Thr	Leu	Ser	His	Thr	Gly	
	210					215					220					
Gln	Ser	Gly	Asn	Ala	Ser	Arg	Ser	Arg	Arg	Val						
225					230					235						
<210> 68																
<211> 483																
<212> PRT																
<213> Varicella zoster																
<400> 68																
Met	Gly	Ser	Gln	Pro	Thr	Asn	Ser	His	Phe	Thr	Leu	Asn	Glu	Gln	Thr	
1				5					10				15			

Leu Cys Gly Thr Asn Ile Ser Leu Leu Gly Asn Asn Arg Phe Ile Gln
 20 25 30

Ile Gly Asn Gly Leu His Met Thr Tyr Ala Pro Gly Phe Phe Gly Asn
 35 40 45

Trp Ser Arg Asp Leu Thr Ile Gly Pro Arg Phe Gly Gly Leu Asn Lys
 50 55 60

Gln Pro Ile His Val Pro Pro Lys Arg Thr Glu Thr Ala Ser Ile Gln
 65 70 75 80

Val Thr Pro Arg Ser Ile Val Ile Asn Arg Met Asn Asn Ile Gln Ile
 85 90 95

Asn Pro Thr Ser Ile Gly Asn Pro Gln Val Thr Ile Arg Leu Pro Leu
 100 105 110

Asn Asn Phe Lys Ser Thr Thr Gln Leu Ile Gln Gln Val Ser Leu Thr
 115 120 125

Asp Phe Phe Arg Pro Asp Ile Glu His Ala Gly Ser Ile Val Leu Ile
 130 135 140

Leu Arg His Pro Ser Asp Met Ile Gly Glu Ala Asn Thr Leu Thr Gln
 145 150 155 160

Ala Gly Arg Asp Pro Asp Val Leu Leu Glu Gly Leu Arg Asn Leu Phe
 165 170 175

Asn Ala Cys Thr Ala Pro Trp Thr Val Gly Glu Gly Gly Gly Leu Arg
 180 185 190

Ala Tyr Val Thr Ser Leu Ser Phe Ile Ala Ala Cys Arg Ala Glu Glu
 195 200 205

Tyr Thr Asp Lys Gln Ala Ala Asp Ala Asn Arg Thr Ala Ile Val Ser
 210 215 220

Ala Tyr Gly Cys Ser Arg Met Glu Thr Arg Leu Ile Arg Phe Ser Glu
 225 230 235 240

Cys Leu Arg Ala Met Val Gln Cys His Val Phe Pro His Arg Phe Ile
 245 250 255
 Ser Phe Phe Gly Ser Leu Leu Glu Tyr Thr Ile Gln Asp Asn Leu Cys
 260 265 270
 Asn Ile Thr Ala Val Ala Lys Gly Pro Gln Glu Ala Ala Arg Thr Asp
 275 280 285
 Lys Thr Ser Thr Arg Arg Val Thr Ala Asn Ile Pro Ala Cys Val Phe
 290 295 300
 Trp Asp Val Asp Lys Asp Leu His Leu Ser Ala Asp Gly Leu Lys His
 305 310 315 320
 Val Phe Leu Val Phe Val Tyr Thr Gln Arg Arg Gln Arg Glu Gly Val
 325 330 335
 Arg Leu His Leu Ala Leu Ser Gln Leu Asn Glu Gln Cys Phe Gly Arg
 340 345 350
 Gly Ile Gly Phe Leu Leu Gly Arg Ile Arg Ala Glu Asn Ala Ala Trp
 355 360 365
 Gly Thr Glu Gly Val Ala Asn Thr His Gln Pro Tyr Asn Thr Arg Ala
 370 375 380
 Leu Pro Leu Val Gln Leu Ser Asn Asp Pro Thr Ser Pro Arg Cys Ser
 385 390 395 400
 Ile Gly Glu Ile Thr Gly Val Asn Trp Asn Leu Ala Arg Gln Arg Leu
 405 410 415
 Tyr Gln Trp Thr Gly Asp Phe Arg Gly Leu Pro Thr Gln Leu Ser Cys
 420 425 430
 Met Tyr Ala Ala Tyr Thr Leu Ile Gly Thr Ile Pro Ser Glu Ser Val
 435 440 445
 Arg Tyr Thr Arg Arg Met Glu Arg Phe Gly Gly Tyr Asn Val Pro Thr
 450 455 460
 Ile Trp Leu Glu Gly Val Val Trp Gly Gly Thr Asn Thr Trp Asn Glu

465 470 475 480

Cys Tyr Tyr

<210> 69
 <211> 775
 <212> PRT
 <213> Varicella zoster

<400> 69

Met Glu Phe Lys Arg Ile Phe Asn Thr Val His Asp Ile Ile Asn Arg
 1 5 10 15

Leu Cys Gln His Gly Tyr Lys Glu Tyr Ile Ile Pro Pro Glu Ser Thr
 20 25 30

Thr Pro Val Glu Leu Met Glu Tyr Ile Ser Thr Ile Val Ser Lys Leu
 35 40 45

Lys Ala Val Thr Arg Gln Asp Glu Arg Val Tyr Arg Cys Cys Gly Glu
 50 55 60

Leu Ile His Cys Arg Ile Asn Leu Arg Ser Val Ser Met Glu Thr Trp
 65 70 75 80

Leu Thr Ser Pro Ile Leu Cys Leu Thr Pro Arg Val Arg Gln Ala Ile
 85 90 95

Glu Gly Arg Arg Asp Glu Ile Arg Arg Ala Ile Leu Glu Pro Phe Leu
 100 105 110

Lys Asp Gln Tyr Pro Ala Leu Ala Thr Leu Gly Leu Gln Ser Ala Leu
 115 120 125

Lys Tyr Glu Asp Phe Tyr Leu Thr Lys Leu Glu Glu Gly Lys Leu Glu
 130 135 140

Ser Leu Cys Gln Phe Phe Leu Arg Leu Ala Ala Thr Val Thr Thr Glu
 145 150 155 160

Ile Val Asn Leu Pro Lys Ile Ala Thr Leu Ile Pro Gly Ile Asn Asp
 165 170 175

Gly Tyr Thr Trp Thr Asp Val Cys Arg Val Phe Phe Thr Ala Leu Ala
180 185 190

Cys Gln Lys Ile Val Pro Ala Thr Pro Val Met Met Phe Leu Gly Arg
195 200 205

Glu Thr Gly Ala Thr Ala Ser Cys Tyr Leu Met Asp Pro Glu Ser Ile
210 215 220

Thr Val Gly Arg Ala Val Arg Ala Ile Thr Gly Asp Val Gly Thr Val
225 230 235 240

Leu Gln Ser Arg Gly Gly Val Gly Ile Ser Leu Gln Ser Leu Asn Leu
245 250 255

Ile Pro Thr Glu Asn Gln Thr Lys Gly Leu Leu Ala Val Leu Lys Leu
260 265 270

Leu Asp Cys Met Val Met Ala Ile Asn Ser Asp Cys Glu Arg Pro Thr
275 280 285

Gly Val Cys Val Tyr Ile Glu Pro Trp His Val Asp Leu Gln Thr Val
290 295 300

Leu Ala Thr Arg Gly Met Leu Val Arg Asp Glu Ile Phe Arg Cys Asp
305 310 315 320

Asn Ile Phe Cys Cys Leu Trp Thr Pro Asp Leu Phe Phe Glu Arg Tyr
325 330 335

Leu Ser Tyr Leu Lys Gly Ala Ser Asn Val Gln Trp Thr Leu Phe Asp
340 345 350

Asn Arg Ala Asp Ile Leu Arg Thr Leu His Gly Glu Ala Phe Thr Ser
355 360 365

Thr Tyr Leu Arg Leu Glu Arg Glu Gly Leu Gly Val Ser Ser Val Pro
370 375 380

Ile Gln Asp Ile Ala Phe Thr Ile Ile Arg Ser Ala Ala Val Thr Gly
385 390 395 400

Ser Pro Phe Leu Met Phe Lys Asp Ala Cys Asn Arg Asn Tyr His Met
 405 410 415
 Asn Thr Gln Gly Asn Ala Ile Thr Gly Ser Asn Leu Cys Thr Glu Ile
 420 425 430
 Val Gln Lys Ala Asp Ala His Gln His Gly Val Cys Asn Leu Ala Ser
 435 440 445
 Ile Asn Leu Thr Thr Cys Leu Ser Lys Gly Pro Val Ser Phe Asn Leu
 450 455 460
 Asn Asp Leu Gln Leu Thr Ala Arg Thr Thr Val Ile Phe Leu Asn Gly
 465 470 475 480
 Val Leu Ala Ala Gly Asn Phe Pro Cys Lys Lys Ser Cys Lys Gly Val
 485 490 495
 Lys Asn Asn Arg Ser Leu Gly Ile Gly Ile Gln Gly Leu His Thr Thr
 500 505 510
 Cys Leu Arg Leu Gly Phe Asp Leu Thr Ser Gln Pro Ala Arg Arg Leu
 515 520 525
 Asn Val Gln Ile Ala Glu Leu Met Leu Tyr Glu Thr Met Lys Thr Ser
 530 535 540
 Met Glu Met Cys Lys Ile Gly Gly Leu Ala Pro Phe Lys Gly Phe Thr
 545 550 555 560
 Glu Ser Lys Tyr Ala Lys Gly Trp Leu His Gln Asp Gly Phe Ser Thr
 565 570 575
 Ile Ser Tyr Leu Asp Leu Pro Trp Cys Thr Leu Arg Asp Asp Ile Cys
 580 585 590
 Ala Tyr Gly Leu Tyr Asn Ser Gln Phe Leu Ala Leu Met Pro Thr Val
 595 600 605
 Ser Ser Ala Gln Val Thr Glu Cys Ser Glu Gly Phe Ser Pro Ile Tyr
 610 615 620
 Asn Asn Met Phe Ser Lys Val Thr Thr Ser Gly Glu Leu Leu Arg Pro

625		630		635		640									
Asn	Leu	Asp	Leu	Met	Asp	Glu	Leu	Arg	Asp	Met	Tyr	Ser	Cys	Glu	Glu
				645					650					655	
Lys	Arg	Leu	Glu	Val	Ile	Asn	Ile	Leu	Glu	Lys	Asn	Gln	Trp	Ser	Val
			660					665					670		
Ile	Arg	Ser	Phe	Gly	Cys	Leu	Ser	Asn	Ser	His	Pro	Leu	Leu	Lys	Tyr
		675					680					685			
Lys	Thr	Ala	Phe	Glu	Tyr	Glu	Gln	Glu	Asp	Leu	Val	Asp	Met	Cys	Ala
	690					695					700				
Glu	Arg	Ala	Pro	Phe	Ile	Asp	Gln	Ser	Gln	Ser	Met	Thr	Leu	Phe	Ile
705					710					715					720
Glu	Glu	Arg	Pro	Asp	Gly	Thr	Ile	Pro	Ala	Ser	Lys	Ile	Met	Asn	Leu
				725					730					735	
Leu	Ile	Arg	Ala	Tyr	Lys	Ala	Gly	Leu	Lys	Thr	Gly	Met	Tyr	Tyr	Cys
			740					745					750		
Lys	Ile	Arg	Lys	Ala	Thr	Asn	Ser	Gly	Leu	Phe	Ala	Gly	Gly	Glu	Leu
		755					760					765			
Thr	Cys	Thr	Ser	Cys	Ala	Leu									
	770					775									
<210>	70														
<211>	306														
<212>	PRT														
<213>	Varicella	zoster													
<400>	70														
Met	Asp	Gln	Lys	Asp	Cys	Ser	His	Phe	Phe	Tyr	Arg	Pro	Glu	Cys	Pro
1				5					10					15	
Asp	Ile	Asn	Asn	Leu	Arg	Ala	Leu	Ser	Ile	Ser	Asn	Arg	Trp	Leu	Glu
			20					25					30		
Ser	Asp	Phe	Ile	Ile	Glu	Asp	Asp	Tyr	Gln	Tyr	Leu	Asp	Cys	Leu	Thr
		35					40					45			

Glu	Asp	Glu	Leu	Ile	Phe	Tyr	Arg	Phe	Ile	Phe	Thr	Phe	Leu	Ser	Ala	50	55	60
Ala	Asp	Asp	Leu	Val	Asn	Val	Asn	Leu	Gly	Ser	Leu	Thr	Gln	Leu	Phe	65	70	75
Ser	Gln	Lys	Asp	Ile	His	His	Tyr	Tyr	Ile	Glu	Gln	Glu	Cys	Ile	Glu	85	90	95
Val	Val	His	Ala	Arg	Val	Tyr	Ser	Gln	Ile	Gln	Leu	Met	Leu	Phe	Arg	100	105	110
Gly	Asp	Glu	Ser	Leu	Arg	Val	Gln	Tyr	Val	Asn	Val	Thr	Ile	Asn	Asn	115	120	125
Pro	Ser	Ile	Gln	Gln	Lys	Val	Gln	Trp	Leu	Glu	Glu	Lys	Val	Arg	Asp	130	135	140
Asn	Pro	Ser	Val	Ala	Glu	Lys	Tyr	Ile	Leu	Met	Ile	Leu	Ile	Glu	Gly	145	150	155
Ile	Phe	Phe	Val	Ser	Ser	Phe	Ala	Ala	Ile	Ala	Tyr	Leu	Arg	Asn	Asn	165	170	175
Gly	Leu	Phe	Val	Val	Thr	Cys	Gln	Phe	Asn	Asp	Leu	Ile	Ser	Arg	Asp	180	185	190
Glu	Ala	Ile	His	Thr	Ser	Ala	Ser	Cys	Cys	Ile	Tyr	Asn	Asn	Tyr	Val	195	200	205
Pro	Glu	Lys	Pro	Ala	Ile	Thr	Arg	Ile	His	Gln	Leu	Phe	Ser	Glu	Ala	210	215	220
Val	Glu	Ile	Glu	Cys	Ala	Phe	Leu	Lys	Ser	His	Ala	Pro	Lys	Thr	Arg	225	230	235
Leu	Val	Asn	Val	Asp	Ala	Ile	Thr	Gln	Tyr	Val	Lys	Phe	Ser	Ala	Asp	245	250	255
Arg	Leu	Leu	Ser	Ala	Ile	Asn	Val	Pro	Lys	Leu	Phe	Asn	Thr	Pro	Pro	260	265	270

Pro Asp Ser Asp Phe Pro Leu Ala Phe Met Ile Ala Asp Lys Asn Thr
 275 280 285

Asn Phe Phe Glu Arg His Ser Thr Ser Tyr Ala Gly Thr Val Ile Asn
 290 295 300

Asp Leu
 305

<210> 71
 <211> 408
 <212> PRT
 <213> Varicella zoster

<400> 71

Met Asp Leu Arg Ser Arg Thr Asp Asp Ala Leu Asp Met Glu Leu His
 1 5 10 15

Ala Gly Phe Asp Ala Pro Glu Ile Ala Arg Ala Val Leu Thr Glu Lys
 20 25 30

Thr Leu Thr Gly Leu Ile Ser Ser Ile Ser Pro Leu Val Asn Arg Leu
 35 40 45

Arg Asp Ser Ile Leu Ile Phe Ser Asp Glu Gly Leu Ile Ile His Cys
 50 55 60

Ser Leu Glu Thr Glu Gln Leu Tyr Ile Pro Ile Pro Ala Asn Met Phe
 65 70 75 80

Asp Gln Tyr Asn Trp Thr Gly Pro Arg Met Val Val Leu Ala Ala Thr
 85 90 95

Glu Gly Arg Ser Ser Leu Ile Asp Ala Phe Arg His Thr Lys Asp Pro
 100 105 110

Ser Thr Pro Thr Arg Leu Tyr Phe Lys Phe Thr Gly Gln Pro Pro Glu
 115 120 125

Arg Ser Ile Ile Gln Thr Met Val Trp Gln Arg Pro Gly Asp Cys Gly
 130 135 140

Pro Asp Asp Gln Val Gln Cys Tyr Lys Gln Val Val Lys Arg Glu Leu
 145 150 155 160

Ala Cys Tyr Thr Met Met Phe Pro Asn Leu Thr Pro Asp Ile Ser Ile
165 170 175

Cys Leu Lys Arg Asp Gln Phe Thr Arg Leu Gln Arg Leu Leu Lys Thr
180 185 190

Phe Gly Phe Thr Thr Cys Phe Ile Leu Thr Ala Thr Asp Met Tyr Ile
195 200 205

Gln Thr Ala Gly Gly Gly Phe Ile Ser Phe Asn Val Ser Leu Asp Ile
210 215 220

Asn Gly Ser Lys Pro Thr Pro Tyr Asn Leu Ile Arg Ser Ile Thr Asn
225 230 235 240

Ser Lys Arg Ile Leu Asn Asn Val Val Tyr Gly Ser Gly Ser Met Arg
245 250 255

Glu Phe Gly Val Leu Leu Glu Thr His Ser Gly Phe Arg Ser Ala Val
260 265 270

Gln Asn Leu Lys Leu Thr Arg Asp Glu Thr Cys Tyr Ile Asn Phe Tyr
275 280 285

Leu Ala Leu Thr Asn Ser Pro Met Val Gly Leu Tyr Ile Gln Arg Ser
290 295 300

Ala Pro Val His Ser Phe Phe Tyr Ala Thr Phe Leu Ser Pro Lys Asp
305 310 315 320

Leu Lys Glu Lys Leu Thr Ser Met Gln Leu Phe Ala Asn Met Glu Ser
325 330 335

Val Lys Asp Glu Pro Pro Leu Lys Lys Arg Arg Asn Leu Leu Thr Lys
340 345 350

Arg Asn Glu Lys Asn Thr Gly Asn Lys Met Gly Gly Lys Leu Pro Glu
355 360 365

Thr Thr Trp Gln Glu Gly Ile Gly Ile Arg Glu Tyr Cys Val Ala Pro
370 375 380

Pro Val Asp Pro Ala Gly Thr Leu Asp Tyr Ser Glu Leu Ser Arg Glu
 385 390 395 400

Ser Asp Val Ile Cys Thr Val Lys
 405

<210> 72
 <211> 406
 <212> PRT
 <213> Varicella zoster

<400> 72

Met Ala Val Asn Gly Glu Arg Ala Val His Asp Glu Asn Leu Gly Val
 1 5 10 15

Leu Asp Arg Glu Leu Ile Arg Ala Gln Ser Ile Gln Gly Cys Val Gly
 20 25 30

Asn Pro Gln Glu Cys Asn Ser Cys Ala Ile Thr Ser Ala Ser Arg Leu
 35 40 45

Phe Leu Val Gly Leu Gln Ala Ser Val Ile Thr Ser Gly Leu Ile Leu
 50 55 60

Gln Tyr His Val Cys Glu Ala Ala Val Asn Ala Thr Ile Met Gly Leu
 65 70 75 80

Ile Val Val Ser Gly Leu Trp Pro Thr Ser Val Lys Phe Leu Arg Thr
 85 90 95

Leu Ala Lys Leu Gly Arg Cys Leu Gln Thr Val Val Val Leu Gly Phe
 100 105 110

Ala Val Leu Trp Ala Val Gly Cys Pro Ile Ser Arg Asp Leu Pro Phe
 115 120 125

Val Glu Leu Leu Gly Ile Ser Ile Ser Ala Ile Thr Gly Thr Val Ala
 130 135 140

Ala Val His Ile His Tyr Tyr Asn Phe Val Thr Thr Phe Asn Gly Pro
 145 150 155 160

His Ile Tyr Phe Tyr Val Met Met Leu Gly Thr Gly Leu Gly Gly Leu

				165				170				175			
Leu	Thr	Val	Ile	Leu	Tyr	Met	Tyr	Val	Ser	Lys	Tyr	Glu	Val	Leu	Ile
180								185				190			
Gly	Leu	Cys	Ile	Ser	Ile	Val	Thr	Leu	Val	Ser	Ile	Val	Asp	Ala	Ala
195								200				205			
Thr	Asp	Leu	Gln	Asp	Thr	Cys	Ile	Tyr	Arg	Lys	Asn	Arg	His	Lys	Gln
210				215								220			
Leu	Asn	Thr	Tyr	Thr	Asp	Leu	Gly	Phe	Ala	Val	Val	Tyr	Thr	Gln	Asn
225				230				235				240			
Asp	Arg	Gly	Arg	Val	Cys	Asp	His	Arg	Glu	Ser	Ser	Arg	Thr	Leu	Lys
				245				250				255			
Arg	Val	Phe	Lys	Gly	Ile	Arg	Ile	Met	Ser	Val	Ile	Pro	Pro	Val	Leu
260								265				270			
Tyr	Ile	Val	Thr	Pro	Leu	Met	Trp	Ala	Ile	Ser	His	Ile	Ile	Lys	Leu
275				280								285			
Asn	His	Phe	Ile	Lys	Leu	Thr	Gln	Val	Thr	Leu	Ala	Val	Ser	Ile	Gly
290				295				300							
Gly	His	Ile	Ile	Ala	Phe	Gly	Leu	Gln	Gly	Phe	Ala	Val	Leu	Tyr	Gln
305				310				315				320			
Glu	Lys	Lys	Asn	Leu	Trp	Val	Ile	Val	Leu	Tyr	Thr	Thr	Thr	Ser	Val
				325				330				335			
Thr	Gly	Ile	Ala	Val	Thr	Phe	Ala	Gly	Ile	Ser	Trp	Gly	Ala	Ile	Ile
340								345				350			
Ile	Leu	Thr	Ser	Thr	Val	Ala	Ala	Gly	Leu	Thr	Cys	Ile	Gln	Met	Met
355				360								365			
Arg	Leu	Ser	Val	Lys	Pro	Ile	Asp	Cys	Phe	Met	Ala	Ser	His	Ile	Thr
370				375				380							
Lys	Val	Tyr	His	Val	Cys	Val	Tyr	Ile	Ile	Ile	Asn	Leu	Cys	Tyr	Leu
385				390				395				400			

Cys Gly Thr Tyr Val Ser
405

<210> 73
<211> 560
<212> PRT
<213> Varicella zoster

<400> 73

Met Lys Arg Ile Gln Ile Asn Leu Ile Leu Thr Ile Ala Cys Ile Gln
1 5 10 15

Leu Ser Thr Glu Ser Gln Pro Thr Pro Val Ser Ile Thr Glu Leu Tyr
20 25 30

Thr Ser Ala Ala Thr Arg Lys Pro Asp Pro Ala Val Ala Pro Thr Ser
35 40 45

Ala Ala Ser Arg Lys Pro Asp Pro Ala Val Ala Pro Thr Ser Ala Ala
50 55 60

Ser Arg Lys Pro Asp Pro Ala Val Ala Pro Thr Ser Ala Ala Ser Arg
65 70 75 80

Lys Pro Asp Pro Ala Val Ala Pro Thr Ser Ala Ala Thr Arg Lys Pro
85 90 95

Asp Pro Ala Val Ala Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro
100 105 110

Ala Val Ala Pro Thr Ser Ala Ala Thr Arg Lys Pro Asp Pro Ala Val
115 120 125

Ala Pro Thr Ser Ala Ala Ser Arg Lys Pro Asp Pro Ala Ala Asn Thr
130 135 140

Gln His Ser Gln Pro Pro Phe Leu Tyr Glu Asn Ile Gln Cys Val His
145 150 155 160

Gly Gly Ile Gln Ser Ile Pro Tyr Phe His Thr Phe Ile Met Pro Cys
165 170 175

Tyr Met Arg Leu Thr Thr Gly Gln Gln Ala Ala Phe Lys Gln Gln Gln
 180 185 190

Lys Thr Tyr Glu Gln Tyr Ser Leu Asp Pro Glu Gly Ser Asn Ile Thr
 195 200 205

Arg Trp Lys Ser Leu Ile Arg Pro Asp Leu His Ile Glu Val Trp Phe
 210 215 220

Thr Arg His Leu Ile Asp Pro His Arg Gln Leu Gly Asn Ala Leu Ile
 225 230 235 240

Arg Met Pro Asp Leu Pro Val Met Leu Tyr Ser Asn Ser Ala Asp Leu
 245 250 255

Asn Leu Ile Asn Asn Pro Glu Ile Phe Thr His Ala Lys Glu Asn Tyr
 260 265 270

Val Ile Pro Asp Val Lys Thr Thr Ser Asp Phe Ser Val Thr Ile Leu
 275 280 285

Ser Met Asp Ala Thr Thr Glu Gly Thr Tyr Ile Trp Arg Val Val Asn
 290 295 300

Thr Lys Thr Lys Asn Val Ile Ser Glu His Ser Ile Thr Val Thr Thr
 305 310 315 320

Tyr Tyr Arg Pro Asn Ile Thr Val Val Gly Asp Pro Val Leu Thr Gly
 325 330 335

Gln Thr Tyr Ala Ala Tyr Cys Asn Val Ser Lys Tyr Tyr Pro Pro His
 340 345 350

Ser Val Arg Val Arg Trp Thr Ser Arg Phe Gly Asn Ile Gly Lys Asn
 355 360 365

Phe Ile Thr Asp Ala Ile Gln Glu Tyr Ala Asn Gly Leu Phe Ser Tyr
 370 375 380

Val Ser Ala Val Arg Ile Pro Gln Gln Lys Gln Met Asp Tyr Pro Pro
 385 390 395 400

Pro Ala Ile Gln Cys Asn Val Leu Trp Ile Arg Asp Gly Val Ser Asn

	405		410		415												
Met	Lys	Tyr	Ser	Ala	Val	Val	Thr	Pro	Asp	Val	Tyr	Pro	Phe	Pro	Asn		
			420					425					430				
Val	Ser	Ile	Gly	Ile	Ile	Asp	Gly	His	Ile	Val	Cys	Thr	Ala	Lys	Cys		
		435					440					445					
Val	Pro	Arg	Gly	Val	Val	His	Phe	Val	Trp	Trp	Val	Asn	Asp	Ser	Pro		
	450					455					460						
Ile	Asn	His	Glu	Asn	Ser	Glu	Ile	Thr	Gly	Val	Cys	Asp	Gln	Asn	Lys		
465				470					475						480		
Arg	Phe	Val	Asn	Met	Gln	Ser	Ser	Cys	Pro	Thr	Ser	Glu	Leu	Asp	Gly		
			485						490					495			
Pro	Ile	Thr	Tyr	Ser	Cys	His	Leu	Asp	Gly	Tyr	Pro	Lys	Lys	Phe	Pro		
			500					505					510				
Pro	Phe	Ser	Ala	Val	Tyr	Thr	Tyr	Asp	Ala	Ser	Thr	Tyr	Ala	Thr	Thr		
		515					520					525					
Phe	Ser	Val	Val	Ala	Val	Ile	Ile	Gly	Val	Ile	Ser	Ile	Leu	Gly	Thr		
	530					535					540						
Leu	Gly	Leu	Ile	Ala	Val	Ile	Ala	Thr	Leu	Cys	Ile	Arg	Cys	Cys	Ser		
545					550					555					560		
<210>	74																
<211>	396																
<212>	PRT																
<213>	Varicella zoster																
<400>	74																
Met	Asn	Glu	Ala	Val	Ile	Asp	Pro	Ile	Leu	Glu	Thr	Ala	Val	Asn	Thr		
1				5					10					15			
Gly	Asp	Met	Phe	Cys	Ser	Gln	Thr	Ile	Pro	Asn	Arg	Cys	Leu	Lys	Asp		
		20						25					30				
Thr	Ile	Leu	Ile	Glu	Val	Gln	Pro	Glu	Cys	Ala	Asp	Thr	Leu	Gln	Cys		
	35						40					45					

431

Ile Asn Ala Tyr Ile Phe Gly Arg Ser Ser Lys Ser Arg Ser Gly Ile
 275 280 285

Ile Val Cys Pro Thr Ala Trp Pro Ala Gly Glu His Cys Lys Phe Tyr
 290 295 300

Val Tyr Asn Leu Thr Gly Asp Asp Ile Arg Ile Lys Thr Gly Asp Arg
 305 310 315 320

Leu Ala Gln Val Leu Leu Ile Asp His Asn Thr Gln Ile His Leu Lys
 325 330 335

His Asn Val Leu Ser Asn Ile Ala Phe Pro Tyr Ala Ile Arg Gly Lys
 340 345 350

Cys Gly Ile Pro Gly Val Gln Trp Tyr Phe Thr Lys Thr Leu Asp Leu
 355 360 365

Ile Ala Thr Pro Ser Glu Arg Gly Thr Arg Gly Phe Gly Ser Thr Asp
 370 375 380

Lys Glu Thr Asn Asp Val Asp Phe Leu Leu Lys His
 385 390 395

<210> 75
 <211> 1083
 <212> PRT
 <213> Varicella zoster

<400> 75

Met Asp Lys Ser Ser Lys Pro Thr Ile Arg Leu Leu Phe Ala Thr Lys
 1 5 10 15

Gly Cys Ala Ile Ser His Ser Leu Leu Leu Thr Gly Gln Ile Ser
 20 25 30

Thr Glu Pro Leu Tyr Val Val Ser Tyr Thr Trp Thr Pro Asp Leu Asp
 35 40 45

Asp Val Phe Val Lys Asn Gly Arg Glu Glu Ile Thr Gln Val Ile Pro
 50 55 60

Thr Lys Arg Pro Arg Glu Val Thr Glu Asn Asp Glu Glu Asn Gln Ile
 65 70 75 80

Met His Leu Phe Cys Ser Arg Asp Val Asn Val Ile Phe Tyr Leu Ile
85 90 95

Gly Gly Phe Ser Thr Gly Asp Val Arg Ser Arg Val Trp Pro Ile Phe
100 105 110

Phe Cys Cys Phe Lys Thr Gln Thr Asp Phe Lys Ala Leu Tyr Lys Ala
115 120 125

Leu Trp Tyr Gly Ala Pro Leu Asn Pro His Ile Ile Ser Asp Thr Leu
130 135 140

Cys Ile Ser Glu Thr Phe Asp Ile His Ser Glu Val Ile Gln Thr Leu
145 150 155 160

Met Val Thr Thr His His Leu Asn Arg Lys Gly Leu Ser Asp Asn Gly
165 170 175

Leu Cys Ile Thr Glu Ala Thr Leu Cys Lys Leu Val Lys Lys Ser Val
180 185 190

Gly Arg Gln Glu Leu Thr Ser Leu Tyr Ala His Tyr Glu Arg Gln Val
195 200 205

Leu Ala Ala Tyr Arg Arg Leu Tyr Trp Gly Tyr Gly Cys Ser Pro Phe
210 215 220

Trp Tyr Ile Val Arg Phe Gly Pro Ser Glu Lys Thr Leu Val Leu Ala
225 230 235 240

Thr Arg Tyr Tyr Leu Leu Gln Thr Asp Thr Ser Tyr Asn Thr Leu Glu
245 250 255

Thr Pro Leu Tyr Asp Leu Gln Ala Ile Lys Asp Leu Phe Leu Thr Tyr
260 265 270

Gln Val Pro Ala Leu Pro Asn Cys Ser Gly Tyr Asn Ile Ser Asp Leu
275 280 285

Leu Ser Phe Asp Lys Leu Ser Met Phe Cys Cys Ser Ser Thr Tyr Thr
290 295 300

Arg Gly Leu Thr Ala Lys Asn Ala Leu Ser Tyr Ile Leu Gln Arg Ile
 305 310 315 320

His Thr Asp Thr Thr Glu Ile His Ala Val Ser Glu Tyr Ile Thr Asn
 325 330 335

Asp Arg Lys Gly Leu Lys Val Pro Asp Arg Glu Phe Val Asp Tyr Ile
 340 345 350

Tyr Leu Ala His Phe Glu Cys Phe Asn Arg Lys Gln Ile Ala Asp His
 355 360 365

Leu Gln Ala Val Thr Tyr Ser Asp Phe Val Asn Lys Pro Val Leu Leu
 370 375 380

Lys Ser Ser Asn Leu Gly Lys Arg Ala Thr Ala Asn Phe Phe Asn His
 385 390 395 400

Val Arg Ser Arg Leu Asn Met Arg Asp Tyr Ile Lys Lys Asn Val Ile
 405 410 415

Cys Asp Val Thr Glu Leu Gly Pro Glu Ile Gly His Lys Tyr Thr Ile
 420 425 430

Thr Lys Thr Tyr Thr Leu Ser Leu Thr Tyr Ala Ala Lys Pro Ser Lys
 435 440 445

Phe Ile Gly Val Cys Asp Leu Ala Thr Thr Leu Thr Arg Arg Val Glu
 450 455 460

Asn Ile Glu Lys Gln Phe Ser Pro Tyr Gly Trp Ser Ser Thr Ile Pro
 465 470 475 480

Ser Asn Pro Pro Gly Phe Asp Glu Leu Ser Asn Phe Glu Asp Ser Gly
 485 490 495

Val Ser Ala Glu Ala Leu Arg Ala Ala Asn Phe Ala Asn Asp Thr Pro
 500 505 510

Asn Gln Ser Gly Arg Thr Gly Phe Asp Thr Ser Pro Gly Ile Thr Lys
 515 520 525

Leu Leu Leu Phe Phe Ser Ala Ala Thr Gly Ile Ala Thr His Asp Val
 530 535 540

Ser Ile Leu Ser Tyr Lys Thr Pro Leu Glu Ala Leu Ile Gly His Ser
 545 550 555 560

Glu Val Thr Gly Pro Met Pro Val Tyr Arg Val Ala Leu Pro His Gly
 565 570 575

Ala Gln Ala Phe Ala Val Ile Ala Asn Asp Thr Trp Ser Ser Ile Thr
 580 585 590

Asn Arg Tyr Thr Leu Pro His Glu Ala Arg Leu Ile Ala Glu Asp Leu
 595 600 605

Lys Gln Ile Asn Pro Cys Asn Phe Val Ala Ala Ser Leu Arg Asp Met
 610 615 620

Gln Leu Thr Leu Leu Leu Ser Thr Ser Val Lys Asn Val Ser Lys Ile
 625 630 635 640

Ser Ser Asn Ile Pro Lys Asp Gln Leu Tyr Ile Asn Arg Asn Glu Leu
 645 650 655

Phe Asn Thr Asn Leu Ile Ile Thr Asn Leu Ile Leu Asp Val Asp Phe
 660 665 670

His Ile Arg Lys Pro Ile Pro Leu Gly Ile Leu His Ala Gly Met Arg
 675 680 685

Ala Phe Arg His Gly Ile Leu Thr Ala Met Gln Leu Leu Phe Pro Lys
 690 695 700

Ala Val Val Asn Pro Asn Lys Asp Pro Cys Tyr Phe Tyr Lys Thr Ala
 705 710 715 720

Cys Pro Glu Pro Thr Val Glu Val Leu Asp Asp Asp Asn Leu Leu Asp
 725 730 735

Ile Thr Ser His Ser Asp Ile Asp Phe Tyr Ile Glu Asn Gly Glu Leu
 740 745 750

Tyr Thr Cys Val Glu Glu Asn Tyr Thr Glu Asp Val Trp Phe Phe Asp

755																	
Thr	Gln	Thr	Thr	Ser	Glu	Val	His	Thr	His	Ala	Asp	Val	Ser	Asn	Asn		
770						775					780						
Glu	Asn	Leu	His	Glu	Thr	Leu	Pro	Cys	Asn	Cys	Lys	Glu	Lys	Ile	Gly		
785					790					795					800		
Phe	Arg	Val	Cys	Val	Pro	Ile	Pro	Asn	Pro	Tyr	Ala	Leu	Val	Gly	Ser		
				805					810					815			
Ser	Thr	Leu	Lys	Gly	Phe	Ala	Gln	Ile	Leu	Gln	Gln	Ala	Val	Leu	Leu		
			820					825					830				
Glu	Arg	Glu	Phe	Val	Glu	Tyr	Ile	Gly	Pro	Tyr	Leu	Arg	Asp	Phe	Ser		
	835						840					845					
Phe	Ile	Asp	Thr	Gly	Val	Tyr	Ser	His	Gly	His	Ser	Leu	Arg	Leu	Pro		
850						855					860						
Phe	Phe	Ser	Lys	Val	Thr	Thr	Thr	Gly	Thr	Ala	Val	Gly	Gln	Leu	Leu		
865					870					875					880		
Pro	Phe	Tyr	Val	Val	Pro	Glu	Gln	Cys	Ile	Asp	Ile	Leu	Ala	Phe	Val		
				885					890					895			
Thr	Ser	His	Arg	Asn	Pro	Ala	Asn	Phe	His	Phe	His	Ser	Arg	Pro	Gln		
			900					905					910				
Ser	Asn	Val	Pro	Val	Gln	Phe	Ile	Leu	His	Asn	Leu	Gly	Gly	Glu	Tyr		
	915						920					925					
Ala	Glu	Phe	Phe	Glu	Arg	Lys	Val	Ala	Arg	Asn	Lys	Gln	Ile	Phe	Ser		
930						935					940						
Ser	Pro	Gln	Ile	Ser	Leu	Thr	Lys	Ala	Leu	Lys	Glu	Arg	Gly	Val	Thr		
945					950					955					960		
Cys	Leu	Asp	Ala	Phe	Thr	Leu	Glu	Ala	Phe	Val	Asp	Ser	Thr	Ile	Leu		
				965					970					975			
Glu	Ser	Ile	Val	Glu	His	Ile	Ala	Val	His	Phe	Pro	Gly	Arg	Asp	Arg		
			980				985						990				

Glu Tyr Thr Leu Thr Ser Ser Lys Cys Ile Ala Ile Lys Arg Asp Trp
 995 1000 1005

Val Leu Phe Gln Leu Ile Cys Gly Thr Lys Gly Phe Thr Cys Leu
 1010 1015 1020

Arg Tyr Pro His Arg Gly Gly Arg Thr Ala Pro Arg Thr Phe Val
 1025 1030 1035

Ser Leu Arg Val Asp His His Asn Arg Leu Cys Ile Ser Leu Ala
 1040 1045 1050

Gln Gln Cys Phe Ala Thr Lys Cys Asp Ser Asn Arg Met His Thr
 1055 1060 1065

Ile Phe Thr Leu Glu Val Pro Asn Tyr Pro Asn Leu Thr Ser Ser
 1070 1075 1080

<210> 76
 <211> 340
 <212> PRT
 <213> Varicella zoster

<400> 76

Met Gln Ala Leu Gly Ile Lys Thr Glu His Phe Ile Ile Met Cys Leu
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Leu Ser Gly His Ala Val Phe Thr Leu Trp Tyr Thr Ala Arg Val Lys
 20 25 30

Phe Glu His Glu Cys Val Tyr Ala Thr Thr Val Ile Asn Gly Gly Pro
 35 40 45

Val Val Trp Gly Ser Tyr Asn Asn Ser Leu Ile Tyr Val Thr Phe Val
 50 55 60

Asn His Ser Thr Phe Leu Asp Gly Leu Ser Gly Tyr Asp Tyr Ser Cys
 65 70 75 80

Arg Glu Asn Leu Leu Ser Gly Asp Thr Met Val Lys Thr Ala Ile Ser
 85 90 95

Thr	Pro	Leu	His	Asp	Lys	Ile	Arg	Ile	Val	Leu	Gly	Thr	Arg	Asn	Cys	
			100					105						110		
His	Ala	Tyr	Phe	Trp	Cys	Val	Gln	Leu	Lys	Met	Ile	Phe	Phe	Ala	Trp	
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Phe	Val	Tyr	Gly	Met	Tyr	Leu	Gln	Phe	Arg	Arg	Ile	Arg	Arg	Met	Phe	
	130					135					140					
Gly	Pro	Phe	Arg	Ser	Ser	Cys	Glu	Leu	Ile	Ser	Pro	Thr	Ser	Tyr	Ser	
145					150					155					160	
Leu	Asn	Tyr	Val	Thr	Arg	Val	Ile	Ser	Asn	Ile	Leu	Leu	Gly	Tyr	Pro	
				165					170					175		
Tyr	Thr	Lys	Leu	Ala	Arg	Leu	Leu	Cys	Asp	Val	Ser	Met	Arg	Arg	Asp	
			180					185					190			
Gly	Met	Ser	Lys	Val	Phe	Asn	Ala	Asp	Pro	Ile	Ser	Phe	Leu	Tyr	Met	
		195					200					205				
His	Lys	Gly	Val	Thr	Leu	Leu	Met	Leu	Leu	Glu	Val	Ile	Ala	His	Ile	
	210					215					220					
Ser	Ser	Gly	Cys	Ile	Val	Leu	Leu	Thr	Leu	Gly	Val	Ala	Tyr	Thr	Pro	
225					230					235					240	
Cys	Ala	Leu	Leu	Tyr	Pro	Thr	Tyr	Ile	Arg	Ile	Leu	Ala	Trp	Val	Val	
				245					250					255		
Val	Cys	Thr	Leu	Ala	Ile	Val	Glu	Leu	Ile	Ser	Tyr	Val	Arg	Pro	Lys	
			260					265					270			
Pro	Thr	Lys	Asp	Asn	His	Leu	Asn	His	Ile	Asn	Thr	Gly	Gly	Ile	Arg	
		275					280					285				
Gly	Ile	Cys	Thr	Thr	Cys	Cys	Ala	Thr	Val	Met	Ser	Gly	Leu	Ala	Ile	
	290					295					300					
Lys	Cys	Phe	Tyr	Ile	Val	Ile	Phe	Ala	Ile	Ala	Val	Val	Ile	Phe	Met	
305					310					315					320	
His	Tyr	Glu	Gln	Arg	Val	Gln	Val	Ser	Leu	Phe	Gly	Glu	Ser	Glu	Asn	

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Ser Gln Lys His					
340					
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<213>	Varicella zoster				
<400>	77				
Met Ala Ser Ala Ser Ile Pro Thr Asp Pro Asp Val Ser Thr Ile Cys					
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Glu Asp Phe Met Asn Leu Leu Pro Asp Glu Pro Ser Asp Asp Phe Ala					
	20		25		30
Leu Glu Val Thr Asp Trp Ala Asn Asp Glu Ala Ile Gly Ser Thr Pro					
	35		40		45
Gly Glu Asp Ser Thr Thr Ser Arg Thr Val Tyr Val Glu Arg Thr Ala					
	50		55		60
Asp Thr Ala Tyr Asn Pro Arg Tyr Ser Lys Arg Arg His Gly Arg Arg					
65		70		75	80
Glu Ser Tyr His His Asn Arg Pro Lys Thr Leu Val Val Val Leu Pro					
	85		90		95
Asp Ser Asn His His Gly Gly Arg Asp Val Glu Thr Gly Tyr Ala Arg					
	100		105		110
Ile Glu Arg Gly His Arg Arg Ser Ser Arg Ser Tyr Asn Thr Gln Ser					
	115		120		125
Ser Arg Lys His Arg Asp Arg Ser Leu Ser Asn Arg Arg Arg Arg Pro					
	130		135		140
Thr Thr Pro Pro Ala Met Thr Thr Gly Glu Arg Asn Asp Gln Thr His					
145		150		155	160
Asp Glu Ser Tyr Arg Leu Arg Phe Ser Lys Arg Asp Ala Arg Arg Glu					
	165		170		175

Arg Ile Arg Lys Glu Tyr Asp Ile Pro Val Asp Arg Ile Thr Gly Arg
 180 185 190

Ala Ile Glu Val Val Ser Thr Ala Gly Ala Ser Val Thr Ile Asp Ser
 195 200 205

Val Arg His Leu Asp Glu Thr Ile Glu Lys Leu Val Val Arg Tyr Ala
 210 215 220

Thr Ile Gln Glu Gly Asp Ser Trp Ala Ser Gly Gly Cys Phe Pro Gly
 225 230 235 240

Ile Lys Gln Asn Thr Ser Trp Pro Glu Leu Met Leu Tyr Gly His Glu
 245 250 255

Leu Tyr Arg Thr Phe Glu Ser Tyr Lys Met Asp Ser Arg Ile Ala Arg
 260 265 270

Ala Leu Arg Glu Arg Val Ile Arg Gly Glu Ser Leu Ile Glu Ala Leu
 275 280 285

Glu Ser Ala Asp Glu Leu Leu Thr Trp Ile Lys Met Leu Ala Ala Lys
 290 295 300

Asn Leu Pro Ile Tyr Thr Asn Asn Pro Ile Val Ala Thr Ser Lys Ser
 305 310 315 320

Leu Leu Glu Asn Leu Lys Leu Lys Leu Gly Pro Phe Val Arg Cys Leu
 325 330 335

Leu Leu Asn Arg Asp Asn Asp Leu Gly Ser Arg Thr Leu Pro Glu Leu
 340 345 350

Leu Arg Gln Gln Arg Phe Ser Asp Ile Thr Cys Ile Thr Thr Tyr Met
 355 360 365

Phe Val Met Ile Ala Arg Ile Ala Asn Ile Val Val Arg Gly Ser Lys
 370 375 380

Phe Val Glu Tyr Asp Asp Ile Ser Cys Asn Val Gln Val Leu Gln Glu
 385 390 395 400

Tyr Thr Pro Gly Ser Cys Leu Ala Gly Val Leu Glu Ala Leu Ile Thr
405 410 415

His Gln Arg Glu Cys Gly Arg Val Glu Cys Thr Leu Ser Thr Trp Ala
420 425 430

Gly His Leu Ser Asp Ala Arg Pro Tyr Gly Lys Tyr Phe Lys Cys Ser
435 440 445

Thr Phe Asn Cys
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<210> 78
<211> 179
<212> PRT
<213> Varicella zoster

<400> 78

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Leu Lys Pro Asp Pro Leu Ala Ser Phe Thr Gln Val Ile Pro Pro Leu
20 25 30

Ala Leu Glu Thr Thr Trp Thr Cys Pro Ala Asn Ser His Ala Pro Thr
35 40 45

Pro Ser Pro Leu Tyr Gly Val Lys Arg Leu Cys Ala Leu Arg Ala Thr
50 55 60

Cys Gly Arg Ala Asp Asp Leu His Ala Phe Leu Ile Gly Leu Gly Arg
65 70 75 80

Arg Asp Lys Pro Ser Glu Ser Pro Met Tyr Val Asp Leu Gln Pro Phe
85 90 95

Cys Ser Leu Leu Asn Ser Gln Arg Leu Leu Pro Glu Met Ala Asn Tyr
100 105 110

Asn Thr Leu Cys Asp Ala Pro Phe Ser Ala Ala Thr Gln Gln Met Met
115 120 125

Leu Glu Ser Gly Gln Leu Gly Val His Leu Ala Ala Ile Gly Tyr His
130 135 140

Cys His Cys Lys Ser Pro Phe Ser Ala Glu Cys Trp Thr Gly Ala Ser
 145 150 155 160

Glu Ala Tyr Asp His Val Val Cys Gly Gly Lys Ala Arg Ala Ala Val
 165 170 175

Gly Gly Leu

<210> 79
 <211> 108
 <212> PRT
 <213> Varicella zoster

<400> 79

Met Ser Arg Val Ser Glu Tyr Gly Val Pro Glu Gly Val Arg Glu Ser
 1 5 10 15

Asp Ser Asp Thr Asp Ser Val Phe Met Tyr Gln His Thr Glu Leu Met
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Gln Asn Asn Ala Ser Pro Leu Val Val Gln Thr Arg Pro Pro Ala Val
 35 40 45

Leu Ile Pro Leu Val Asp Val Pro Arg Pro Arg Ser Arg Arg Lys Ala
 50 55 60

Ser Ala Gln Leu Lys Met Gln Met Asp Arg Leu Cys Asn Val Leu Gly
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Val Val Leu Gln Met Ala Thr Leu Ala Leu Val Thr Tyr Ile Ala Phe
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Val Val His Thr Arg Ala Thr Ser Cys Lys Arg Glu
 100 105

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<220>

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<400> 80

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Met Ser Leu Ile Met Phe Gly Arg Thr Leu Gly Glu Glu Ser Val Arg	
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tat ttt gaa cgt cta aag cgt cgt agg gat gaa cgc ttt ggg acg ttg	96
Tyr Phe Glu Arg Leu Lys Arg Arg Arg Asp Glu Arg Phe Gly Thr Leu	
20 25 30	

gag tcc cct acc ccg tgt tcc acg cgg caa ggg tct ctg gga aac gca	144
Glu Ser Pro Thr Pro Cys Ser Thr Arg Gln Gly Ser Leu Gly Asn Ala	
35 40 45	

acc caa atc ccg ttt ctg aat ttt gct ata gat gta acc cga cgt cat	192
Thr Gln Ile Pro Phe Leu Asn Phe Ala Ile Asp Val Thr Arg Arg His	
50 55 60	

cag gcc gtt att ccc gga att gga acg ctt cac aac tgt tgt gaa tat	240
Gln Ala Val Ile Pro Gly Ile Gly Thr Leu His Asn Cys Cys Glu Tyr	
65 70 75 80	

att cca ctg ttc tcg gct act gct cga cgg gca atg ttt ggc gcg ttt	288
Ile Pro Leu Phe Ser Ala Thr Ala Arg Arg Ala Met Phe Gly Ala Phe	
85 90 95	

cta tcg tca aca ggg tac aac tgt acc ccc aat gta gtt ttg aaa cca	336
Leu Ser Ser Thr Gly Tyr Asn Cys Thr Pro Asn Val Val Leu Lys Pro	
100 105 110	

tgg cga tat tcg gta aat gca aac gta agc cct gaa tta aaa aag gct	384
Trp Arg Tyr Ser Val Asn Ala Asn Val Ser Pro Glu Leu Lys Lys Ala	
115 120 125	

gtc agt agt gta cag ttt tat gaa tat tca ccg gaa gaa gca gca cct	432
Val Ser Ser Val Gln Phe Tyr Glu Tyr Ser Pro Glu Glu Ala Ala Pro	
130 135 140	

cat cga aat gcg tat agc ggt gtt atg aac aca ttt cgc gcg ttt tct	480
His Arg Asn Ala Tyr Ser Gly Val Met Asn Thr Phe Arg Ala Phe Ser	
145 150 155 160	

ctg tcg gat agt ttc tgt cag ttg tct acc ttt aca caa cgg ttt tcg	528
Leu Ser Asp Ser Phe Cys Gln Leu Ser Thr Phe Thr Gln Arg Phe Ser	
165 170 175	

tac ctt gtg gaa aca tct ttt gag agt att gaa gag tgt gga agt cat	576
Tyr Leu Val Glu Thr Ser Phe Glu Ser Ile Glu Glu Cys Gly Ser His	
180 185 190	

ggc aaa cgc gca aag gtt gac gtt cca atc tat ggc aga tat aag ggg	624
Gly Lys Arg Ala Lys Val Asp Val Pro Ile Tyr Gly Arg Tyr Lys Gly	

195	200	205	
acg ttg gaa ctg ttt caa aaa atg atc ctc atg cac acc acg cat ttt			672
Thr Leu Glu Leu Phe Gln Lys Met Ile Leu Met His Thr Thr His Phe			
210	215	220	
att tca tcg gtg cta ttg ggc gat cat gcc gac aga gtt gac tgc ttt			720
Ile Ser Ser Val Leu Leu Gly Asp His Ala Asp Arg Val Asp Cys Phe			
225	230	235	240
ctg cgt aca gtg ttt aac acg cca agt gtt tct gac agt gtt tta gaa			768
Leu Arg Thr Val Phe Asn Thr Pro Ser Val Ser Asp Ser Val Leu Glu			
	245	250	255
cac ttc aaa caa aaa tca act gtg ttt ttg gta cca cgt aga cat ggg			816
His Phe Lys Gln Lys Ser Thr Val Phe Leu Val Pro Arg Arg His Gly			
	260	265	270
aaa aca tgg ttt ctt gta cca tta ata gct tta gta atg gcc acg ttt			864
Lys Thr Trp Phe Leu Val Pro Leu Ile Ala Leu Val Met Ala Thr Phe			
	275	280	285
aga gga att aaa gtg ggt tat acg gct cat ata cgc aaa gca acg gaa			912
Arg Gly Ile Lys Val Gly Tyr Thr Ala His Ile Arg Lys Ala Thr Glu			
	290	295	300
ccc gtg ttt gag ggt atc aag tct cgc ctg gaa cag tgg ttt ggg gca			960
Pro Val Phe Glu Gly Ile Lys Ser Arg Leu Glu Gln Trp Phe Gly Ala			
305	310	315	320
aat tac gtg gat cat gta aaa ggc gaa tct att acg ttt tca ttt acc			1008
Asn Tyr Val Asp His Val Lys Gly Glu Ser Ile Thr Phe Ser Phe Thr			
	325	330	335
gac ggg tct tac agc aca gcg gtg ttc gcg tca agt cac aac aca aac			1056
Asp Gly Ser Tyr Ser Thr Ala Val Phe Ala Ser Ser His Asn Thr Asn			
	340	345	350
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cacaacggcg gttgagttaa ggtatactag gtgggtgtag gttccgggttc acccgataat			1176
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Gly Ile Arg Gly Gln Asp Phe Asn Leu Leu Phe	
355 360	
gtg gat gaa gct aat ttt att cga cct gat gct gta caa act ata gtc	4636
Val Asp Glu Ala Asn Phe Ile Arg Pro Asp Ala Val Gln Thr Ile Val	
365 370 375	
gga ttt tta aat caa acc aat tgt aaa att att ttt gtt tca tca aca	4684
Gly Phe Leu Asn Gln Thr Asn Cys Lys Ile Ile Phe Val Ser Ser Thr	
380 385 390 395	
aat acc gga aaa gca agt aca agt ttt ttg tat aac tta cgt gga tcg	4732
Asn Thr Gly Lys Ala Ser Thr Ser Phe Leu Tyr Asn Leu Arg Gly Ser	
400 405 410	
tcg gat cag ttg tta aac gtt gtt aca tat gta tgc gac gat cac atg	4780

Ser	Asp	Gln	Leu	Leu	Asn	Val	Val	Thr	Tyr	Val	Cys	Asp	Asp	His	Met	
			415					420						425		
ccg	cgt	gtt	tta	gca	cat	agc	gat	gtc	aca	gct	tgt	tcg	tgt	tat	gta	4828
Pro	Arg	Val	Leu	Ala	His	Ser	Asp	Val	Thr	Ala	Cys	Ser	Cys	Tyr	Val	
		430					435					440				
tta	aat	aag	ccg	gtt	ttc	atc	aca	atg	gat	gga	gcc	atg	cgg	cgc	act	4876
Leu	Asn	Lys	Pro	Val	Phe	Ile	Thr	Met	Asp	Gly	Ala	Met	Arg	Arg	Thr	
	445					450					455					
gca	gat	tta	ttt	atg	gcc	gac	tcc	ttc	gtg	cag	gaa	att	gta	ggg	ggg	4924
Ala	Asp	Leu	Phe	Met	Ala	Asp	Ser	Phe	Val	Gln	Glu	Ile	Val	Gly	Gly	
460					465					470					475	
cgt	aaa	cag	aat	tct	ggg	ggg	gtg	ggg	ttt	gac	cgg	cca	tta	ttt	aca	4972
Arg	Lys	Gln	Asn	Ser	Gly	Gly	Val	Gly	Phe	Asp	Arg	Pro	Leu	Phe	Thr	
			480						485					490		
aaa	act	gcc	cgt	gag	agg	ttt	att	tta	tat	cgg	ccg	tca	acc	gtt	gcg	5020
Lys	Thr	Ala	Arg	Glu	Arg	Phe	Ile	Leu	Tyr	Arg	Pro	Ser	Thr	Val	Ala	
		495					500						505			
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Asn	Cys	Ala	Ile	Leu	Ser	Ser	Val	Leu	Tyr	Val	Tyr	Val	Asp	Pro	Ala	
		510					515					520				
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Phe	Thr	Ser	Asn	Thr	Arg	Ala	Ser	Gly	Thr	Gly	Val	Ala	Ile	Val	Gly	
	525					530					535					
cgt	tat	aag	tcg	gat	tgg	att	ata	ttt	gga	ttg	gag	cac	ttt	ttt	ctt	5164
Arg	Tyr	Lys	Ser	Asp	Trp	Ile	Ile	Phe	Gly	Leu	Glu	His	Phe	Phe	Leu	
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aga	gct	tta	act	ggc	acg	tct	tcc	agt	gag	ata	ggg	cgt	tgc	gtt	act	5212
Arg	Ala	Leu	Thr	Gly	Thr	Ser	Ser	Ser	Glu	Ile	Gly	Arg	Cys	Val	Thr	
			560						565					570		
caa	tgc	tta	ggc	cac	ata	ctc	gct	tta	cac	ccc	aat	aca	ttt	aca	aac	5260
Gln	Cys	Leu	Gly	His	Ile	Leu	Ala	Leu	His	Pro	Asn	Thr	Phe	Thr	Asn	
		575					580						585			
gta	cac	gtt	tct	ata	gag	gga	aac	agc	agc	cag	gat	tct	gca	gtt	gcc	5308
Val	His	Val	Ser	Ile	Glu	Gly	Asn	Ser	Ser	Gln	Asp	Ser	Ala	Val	Ala	
		590					595					600				
ata	tcg	ttg	gct	ata	gca	caa	cag	ttt	gct	gtc	ctc	gaa	aag	gga	aac	5356
Ile	Ser	Leu	Ala	Ile	Ala	Gln	Gln	Phe	Ala	Val	Leu	Glu	Lys	Gly	Asn	
	605					610					615					
gtg	cta	tct	tcc	gct	cca	gtg	tta	ctg	ttt	tat	cat	tcc	ata	cct	ccc	5404
Val	Leu	Ser	Ser	Ala	Pro	Val	Leu	Leu	Phe	Tyr	His	Ser	Ile	Pro	Pro	
620					625					630					635	
gga	tgt	agc	gtg	gcg	tac	cct	ttt	ttt	tta	tta	caa	aaa	caa	aaa	acg	5452
Gly	Cys	Ser	Val	Ala	Tyr	Pro	Phe	Phe	Leu	Leu	Gln	Lys	Gln	Lys	Thr	

640										645					650					
ccg gcc gta gac tat ttt gtt aaa cga ttt aac tcc gga aat ata ata	5500																			
Pro Ala Val Asp Tyr Phe Val Lys Arg Phe Asn Ser Gly Asn Ile Ile																				
655 660 665																				
gcc tca cag gag ctt gta tcc cta aca gta aag tta ggt gta gac ccc	5548																			
Ala Ser Gln Glu Leu Val Ser Leu Thr Val Lys Leu Gly Val Asp Pro																				
670 675 680																				
gtg gag tat cta tgt aaa cag ttg gat aac ctg aca gag gta att aaa	5596																			
Val Glu Tyr Leu Cys Lys Gln Leu Asp Asn Leu Thr Glu Val Ile Lys																				
685 690 695																				
ggc ggt atg ggt aat cta gac aca aaa act tac acg ggt aaa ggt acc	5644																			
Gly Gly Met Gly Asn Leu Asp Thr Lys Thr Tyr Thr Gly Lys Gly Thr																				
700 705 710 715																				
acg gga aca atg tca gat gat ctg atg gtt gca tta att atg tcc gtg	5692																			
Thr Gly Thr Met Ser Asp Asp Leu Met Val Ala Leu Ile Met Ser Val																				
720 725 730																				
tat att ggc agt tca tgt ata ccg gat tcc gtg ttt atg cct att aaa	5740																			
Tyr Ile Gly Ser Ser Cys Ile Pro Asp Ser Val Phe Met Pro Ile Lys																				
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taa	5743																			
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Tyr Phe Glu Arg Leu Lys Arg Arg Arg Asp Glu Arg Phe Gly Thr Leu																				
20 25 30																				
Glu Ser Pro Thr Pro Cys Ser Thr Arg Gln Gly Ser Leu Gly Asn Ala																				
35 40 45																				
Thr Gln Ile Pro Phe Leu Asn Phe Ala Ile Asp Val Thr Arg Arg His																				
50 55 60																				
Gln Ala Val Ile Pro Gly Ile Gly Thr Leu His Asn Cys Cys Glu Tyr																				
65 70 75 80																				
Ile Pro Leu Phe Ser Ala Thr Ala Arg Arg Ala Met Phe Gly Ala Phe																				

85								90				95						
Leu	Ser	Ser	Thr	Gly	Tyr	Asn	Cys	Thr	Pro	Asn	Val	Val	Leu	Lys	Pro			
			100					105					110					
Trp	Arg	Tyr	Ser	Val	Asn	Ala	Asn	Val	Ser	Pro	Glu	Leu	Lys	Lys	Ala			
		115					120					125						
Val	Ser	Ser	Val	Gln	Phe	Tyr	Glu	Tyr	Ser	Pro	Glu	Glu	Ala	Ala	Pro			
	130					135					140							
His	Arg	Asn	Ala	Tyr	Ser	Gly	Val	Met	Asn	Thr	Phe	Arg	Ala	Phe	Ser			
145					150					155					160			
Leu	Ser	Asp	Ser	Phe	Cys	Gln	Leu	Ser	Thr	Phe	Thr	Gln	Arg	Phe	Ser			
				165					170					175				
Tyr	Leu	Val	Glu	Thr	Ser	Phe	Glu	Ser	Ile	Glu	Glu	Cys	Gly	Ser	His			
		180						185					190					
Gly	Lys	Arg	Ala	Lys	Val	Asp	Val	Pro	Ile	Tyr	Gly	Arg	Tyr	Lys	Gly			
		195					200					205						
Thr	Leu	Glu	Leu	Phe	Gln	Lys	Met	Ile	Leu	Met	His	Thr	Thr	His	Phe			
	210					215					220							
Ile	Ser	Ser	Val	Leu	Leu	Gly	Asp	His	Ala	Asp	Arg	Val	Asp	Cys	Phe			
225					230					235					240			
Leu	Arg	Thr	Val	Phe	Asn	Thr	Pro	Ser	Val	Ser	Asp	Ser	Val	Leu	Glu			
				245					250					255				
His	Phe	Lys	Gln	Lys	Ser	Thr	Val	Phe	Leu	Val	Pro	Arg	Arg	His	Gly			
			260					265					270					
Lys	Thr	Trp	Phe	Leu	Val	Pro	Leu	Ile	Ala	Leu	Val	Met	Ala	Thr	Phe			
		275					280					285						
Arg	Gly	Ile	Lys	Val	Gly	Tyr	Thr	Ala	His	Ile	Arg	Lys	Ala	Thr	Glu			
	290					295					300							
Pro	Val	Phe	Glu	Gly	Ile	Lys	Ser	Arg	Leu	Glu	Gln	Trp	Phe	Gly	Ala			
305					310					315					320			

Asn Tyr Val Asp His Val Lys Gly Glu Ser Ile Thr Phe Ser Phe Thr
325 330 335

Asp Gly Ser Tyr Ser Thr Ala Val Phe Ala Ser Ser His Asn Thr Asn
340 345 350

Gly Ile Arg Gly Gln Asp Phe Asn Leu Leu Phe Val Asp Glu Ala Asn
355 360 365

Phe Ile Arg Pro Asp Ala Val Gln Thr Ile Val Gly Phe Leu Asn Gln
370 375 380

Thr Asn Cys Lys Ile Ile Phe Val Ser Ser Thr Asn Thr Gly Lys Ala
385 390 395 400

Ser Thr Ser Phe Leu Tyr Asn Leu Arg Gly Ser Ser Asp Gln Leu Leu
405 410 415

Asn Val Val Thr Tyr Val Cys Asp Asp His Met Pro Arg Val Leu Ala
420 425 430

His Ser Asp Val Thr Ala Cys Ser Cys Tyr Val Leu Asn Lys Pro Val
435 440 445

Phe Ile Thr Met Asp Gly Ala Met Arg Arg Thr Ala Asp Leu Phe Met
450 455 460

Ala Asp Ser Phe Val Gln Glu Ile Val Gly Gly Arg Lys Gln Asn Ser
465 470 475 480

Gly Gly Val Gly Phe Asp Arg Pro Leu Phe Thr Lys Thr Ala Arg Glu
485 490 495

Arg Phe Ile Leu Tyr Arg Pro Ser Thr Val Ala Asn Cys Ala Ile Leu
500 505 510

Ser Ser Val Leu Tyr Val Tyr Val Asp Pro Ala Phe Thr Ser Asn Thr
515 520 525

Arg Ala Ser Gly Thr Gly Val Ala Ile Val Gly Arg Tyr Lys Ser Asp
530 535 540

Trp Ile Ile Phe Gly Leu Glu His Phe Phe Leu Arg Ala Leu Thr Gly
 545 550 555 560

Thr Ser Ser Ser Glu Ile Gly Arg Cys Val Thr Gln Cys Leu Gly His
 565 570 575

Ile Leu Ala Leu His Pro Asn Thr Phe Thr Asn Val His Val Ser Ile
 580 585 590

Glu Gly Asn Ser Ser Gln Asp Ser Ala Val Ala Ile Ser Leu Ala Ile
 595 600 605

Ala Gln Gln Phe Ala Val Leu Glu Lys Gly Asn Val Leu Ser Ser Ala
 610 615 620

Pro Val Leu Leu Phe Tyr His Ser Ile Pro Pro Gly Cys Ser Val Ala
 625 630 635 640

Tyr Pro Phe Phe Leu Leu Gln Lys Gln Lys Thr Pro Ala Val Asp Tyr
 645 650 655

Phe Val Lys Arg Phe Asn Ser Gly Asn Ile Ile Ala Ser Gln Glu Leu
 660 665 670

Val Ser Leu Thr Val Lys Leu Gly Val Asp Pro Val Glu Tyr Leu Cys
 675 680 685

Lys Gln Leu Asp Asn Leu Thr Glu Val Ile Lys Gly Gly Met Gly Asn
 690 695 700

Leu Asp Thr Lys Thr Tyr Thr Gly Lys Gly Thr Thr Gly Thr Met Ser
 705 710 715 720

Asp Asp Leu Met Val Ala Leu Ile Met Ser Val Tyr Ile Gly Ser Ser
 725 730 735

Cys Ile Pro Asp Ser Val Phe Met Pro Ile Lys
 740 745

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 <213> Varicella zoster

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gac acc acg aca ccc gag gtg gaa gcg tta gat cat caa atg gat acg	96
Asp Thr Thr Thr Pro Glu Val Glu Ala Leu Asp His Gln Met Asp Thr	
20 25 30	

ctt aat tgg cga att tgg ata att cag gtg atg atg ttc act ttg ggt	144
Leu Asn Trp Arg Ile Trp Ile Ile Gln Val Met Met Phe Thr Leu Gly	
35 40 45	

gcg gta atg ctc ctg gct acg tta att gcc gcc tct tct gaa tat acc	192
Ala Val Met Leu Leu Ala Thr Leu Ile Ala Ala Ser Ser Glu Tyr Thr	
50 55 60	

ggg atc cct tgt ttt tat gct gcc gta gtt gat tat gag tta ttt aac	240
Gly Ile Pro Cys Phe Tyr Ala Ala Val Val Asp Tyr Glu Leu Phe Asn	
65 70 75 80	

gcc acc cta gat ggg ggg gta tgg tcc gga aat aga ggt gga tac agc	288
Ala Thr Leu Asp Gly Gly Val Trp Ser Gly Asn Arg Gly Gly Tyr Ser	
85 90 95	

gcc ccg gtt ttg ttt ttg gaa cca cat agc gtt gtg gca ttt act tac	336
Ala Pro Val Leu Phe Leu Glu Pro His Ser Val Val Ala Phe Thr Tyr	
100 105 110	

tac acg gct tta acg gca atg gcc atg gcg gta tat aca ctg atc acg	384
Tyr Thr Ala Leu Thr Ala Met Ala Met Ala Val Tyr Thr Leu Ile Thr	
115 120 125	

gcc gcg att ata cac cga gaa acg aaa aat caa cgt gtc cgg caa agc	432
Ala Ala Ile Ile His Arg Glu Thr Lys Asn Gln Arg Val Arg Gln Ser	
130 135 140	

tcc ggt gtt gca tgg tta gtt gta gat ccc aca aca ctt ttt tgg ggt	480
Ser Gly Val Ala Trp Leu Val Val Asp Pro Thr Thr Leu Phe Trp Gly	
145 150 155 160	

ctt ttg tca ttg tgg tta tta aac gcc gtt gtg tta tta tta gct tac	528
Leu Leu Ser Leu Trp Leu Leu Asn Ala Val Val Leu Leu Leu Ala Tyr	
165 170 175	

aag caa atc ggc gtg gct gct aca tta tat ctt gga cat ttt gcg aca	576
Lys Gln Ile Gly Val Ala Ala Thr Leu Tyr Leu Gly His Phe Ala Thr	
180 185 190	

agt gta ata ttt aca acg tat ttt tgt gga cgc gga aaa ttg gac gaa	624
Ser Val Ile Phe Thr Thr Tyr Phe Cys Gly Arg Gly Lys Leu Asp Glu	

195	200	205	
acg aac ata aaa gcg gtc gca aat tta cga cag cag agc gtc ttt tta Thr Asn Ile Lys Ala Val Ala Asn Leu Arg Gln Gln Ser Val Phe Leu 210 215 220			672
tat cgc ctt gcg ggg cct acg cgc gca gtg ttc gtg aat ttg atg gct Tyr Arg Leu Ala Gly Pro Thr Arg Ala Val Phe Val Asn Leu Met Ala 225 230 235 240			720
gcg ttg atg gcg ata tgt atc cta ttt gta tca tta atg ctg gaa ctt Ala Leu Met Ala Ile Cys Ile Leu Phe Val Ser Leu Met Leu Glu Leu 245 250 255			768
gtg gtg gcg aat cat cta cat acg gga ctg tgg tca tcg gtg tcc gtg Val Val Ala Asn His Leu His Thr Gly Leu Trp Ser Ser Val Ser Val 260 265 270			816
gcc atg tct aca ttt agt aca ttg tca gtt gta tat ctt ata gta tca Ala Met Ser Thr Phe Ser Thr Leu Ser Val Val Tyr Leu Ile Val Ser 275 280 285			864
gaa tta att ttg gcg cat tat ata cac gtg tta ata gga ccg tcc ctg Glu Leu Ile Leu Ala His Tyr Ile His Val Leu Ile Gly Pro Ser Leu 290 295 300			912
gga acg ctc gtg gcc tgt gct acg ttg gga acc gcc gcg cac tcg tat Gly Thr Leu Val Ala Cys Ala Thr Leu Gly Thr Ala Ala His Ser Tyr 305 310 315 320			960
atg gac cga tta tat gac cct ata tcg gtt caa tct cca cgg tta att Met Asp Arg Leu Tyr Asp Pro Ile Ser Val Gln Ser Pro Arg Leu Ile 325 330 335			1008
ccc aca act cgg gga acc ttg gct tgc ctg gcc gtg ttt tcc gtt gtc Pro Thr Thr Arg Gly Thr Leu Ala Cys Leu Ala Val Phe Ser Val Val 340 345 350			1056
atg ttg ctt ctc aga ttg atg cgt gca tat gtg tat cat cga cag aaa Met Leu Leu Leu Arg Leu Met Arg Ala Tyr Val Tyr His Arg Gln Lys 355 360 365			1104
cgc agt cgg ttc tac ggt gcc gta aga aga gta ccc gag cgg gta cgg Arg Ser Arg Phe Tyr Gly Ala Val Arg Arg Val Pro Glu Arg Val Arg 370 375 380			1152
gga tac ata cga aaa gta aaa cct gca cat aga aat tct cgc cgc aca Gly Tyr Ile Arg Lys Val Lys Pro Ala His Arg Asn Ser Arg Arg Thr 385 390 395 400			1200
aat tac cca tca caa ggc tac ggc tac gtc tat gaa aat gac tca aca Asn Tyr Pro Ser Gln Gly Tyr Gly Tyr Val Tyr Glu Asn Asp Ser Thr 405 410 415			1248
tat gaa acg gac cgc gag gat gag ctg tta tac gag cga tca aac agt Tyr Glu Thr Asp Arg Glu Asp Glu Leu Leu Tyr Glu Arg Ser Asn Ser 420 425 430			1296

ggg tgg gag tag
 Gly Trp Glu
 435

1308

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 <213> Varicella zoster

<400> 83

Met Gly Thr Gln Lys Lys Gly Pro Arg Ser Glu Lys Val Ser Pro Tyr
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Asp Thr Thr Thr Pro Glu Val Glu Ala Leu Asp His Gln Met Asp Thr
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Leu Asn Trp Arg Ile Trp Ile Ile Gln Val Met Met Phe Thr Leu Gly
 35 40 45

Ala Val Met Leu Leu Ala Thr Leu Ile Ala Ala Ser Ser Glu Tyr Thr
 50 55 60

Gly Ile Pro Cys Phe Tyr Ala Ala Val Val Asp Tyr Glu Leu Phe Asn
 65 70 75 80

Ala Thr Leu Asp Gly Gly Val Trp Ser Gly Asn Arg Gly Gly Tyr Ser
 85 90 95

Ala Pro Val Leu Phe Leu Glu Pro His Ser Val Val Ala Phe Thr Tyr
 100 105 110

Tyr Thr Ala Leu Thr Ala Met Ala Met Ala Val Tyr Thr Leu Ile Thr
 115 120 125

Ala Ala Ile Ile His Arg Glu Thr Lys Asn Gln Arg Val Arg Gln Ser
 130 135 140

Ser Gly Val Ala Trp Leu Val Val Asp Pro Thr Thr Leu Phe Trp Gly
 145 150 155 160

Leu Leu Ser Leu Trp Leu Leu Asn Ala Val Val Leu Leu Leu Ala Tyr
 165 170 175

Lys Gln Ile Gly Val Ala Ala Thr Leu Tyr Leu Gly His Phe Ala Thr
 180 185 190
 Ser Val Ile Phe Thr Thr Tyr Phe Cys Gly Arg Gly Lys Leu Asp Glu
 195 200 205
 Thr Asn Ile Lys Ala Val Ala Asn Leu Arg Gln Gln Ser Val Phe Leu
 210 215 220
 Tyr Arg Leu Ala Gly Pro Thr Arg Ala Val Phe Val Asn Leu Met Ala
 225 230 235 240
 Ala Leu Met Ala Ile Cys Ile Leu Phe Val Ser Leu Met Leu Glu Leu
 245 250 255
 Val Val Ala Asn His Leu His Thr Gly Leu Trp Ser Ser Val Ser Val
 260 265 270
 Ala Met Ser Thr Phe Ser Thr Leu Ser Val Val Tyr Leu Ile Val Ser
 275 280 285
 Glu Leu Ile Leu Ala His Tyr Ile His Val Leu Ile Gly Pro Ser Leu
 290 295 300
 Gly Thr Leu Val Ala Cys Ala Thr Leu Gly Thr Ala Ala His Ser Tyr
 305 310 315 320
 Met Asp Arg Leu Tyr Asp Pro Ile Ser Val Gln Ser Pro Arg Leu Ile
 325 330 335
 Pro Thr Thr Arg Gly Thr Leu Ala Cys Leu Ala Val Phe Ser Val Val
 340 345 350
 Met Leu Leu Leu Arg Leu Met Arg Ala Tyr Val Tyr His Arg Gln Lys
 355 360 365
 Arg Ser Arg Phe Tyr Gly Ala Val Arg Arg Val Pro Glu Arg Val Arg
 370 375 380
 Gly Tyr Ile Arg Lys Val Lys Pro Ala His Arg Asn Ser Arg Arg Thr
 385 390 395 400
 Asn Tyr Pro Ser Gln Gly Tyr Gly Tyr Val Tyr Glu Asn Asp Ser Thr

	405	410	415	
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Gly Trp Glu				
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Met Ala Glu Ile Thr Ser Leu Phe Asn Asn Ser Ser Gly Ser Glu Glu				
1 5 10 15				
aaa agg ata gca agt tct gtt tct att gac cag ggc ttg aat gga agt				96
Lys Arg Ile Ala Ser Ser Val Ser Ile Asp Gln Gly Leu Asn Gly Ser				
20 25 30				
aac cca aat gac caa tac aag aac atg ttc gat ata tac tgg aat gag				144
Asn Pro Asn Asp Gln Tyr Lys Asn Met Phe Asp Ile Tyr Trp Asn Glu				
35 40 45				
tac gcc ccg gat ata ggg ttt tgt aca ttt ccg gag gaa gat ggc tgg				192
Tyr Ala Pro Asp Ile Gly Phe Cys Thr Phe Pro Glu Glu Asp Gly Trp				
50 55 60				
atg tta ata cac cca acc acg caa agt atg ttg ttt cga aaa atc cta				240
Met Leu Ile His Pro Thr Thr Gln Ser Met Leu Phe Arg Lys Ile Leu				
65 70 75 80				
gcc ggt gac ttt gga tat acc gat gga caa ggc ata tat agc gct gta				288
Ala Gly Asp Phe Gly Tyr Thr Asp Gly Gln Gly Ile Tyr Ser Ala Val				
85 90 95				
cgg tct acg gaa act gta att cgc caa gtt cag gca acc gtt ttg atg				336
Arg Ser Thr Glu Thr Val Ile Arg Gln Val Gln Ala Thr Val Leu Met				
100 105 110				
aac gcg ttg gat gca act cgg tat gag gac cta gca gca gat tgg gaa				384
Asn Ala Leu Asp Ala Thr Arg Tyr Glu Asp Leu Ala Ala Asp Trp Glu				
115 120 125				
cac cac atc caa caa tgt aac ctg cat gcc ggg gct cta gcg gaa cgt				432
His His Ile Gln Gln Cys Asn Leu His Ala Gly Ala Leu Ala Glu Arg				
130 135 140				

tat ggg cta tgt gga gaa tca gaa gcc gta cgg ctt gca cat cag gtt Tyr Gly Leu Cys Gly Glu Ser Glu Ala Val Arg Leu Ala His Gln Val 145 150 155 160	480
ttt gaa acc tgg cgt caa aca tta cag tca tcg tta ctt gag ttt ctg Phe Glu Thr Trp Arg Gln Thr Leu Gln Ser Ser Leu Leu Glu Phe Leu 165 170 175	528
cgt gga ata acc ggt tgt ctc tat acc agt ggt tta aat gga agg gtc Arg Gly Ile Thr Gly Cys Leu Tyr Thr Ser Gly Leu Asn Gly Arg Val 180 185 190	576
ggt ttt gcc aaa tac gtg gac tgg ata gcc tgt gta ggt att gtg ccc Gly Phe Ala Lys Tyr Val Asp Trp Ile Ala Cys Val Gly Ile Val Pro 195 200 205	624
gtt gta aga aag gta cga tca gaa cag aat gga acc cct gca cca tta Val Val Arg Lys Val Arg Ser Glu Gln Asn Gly Thr Pro Ala Pro Leu 210 215 220	672
aat acg tat atg ggt caa gcg gca gaa ctg tcc cag atg tta aaa gtt Asn Thr Tyr Met Gly Gln Ala Ala Glu Leu Ser Gln Met Leu Lys Val 225 230 235 240	720
gcc gat gca acg ttg gcc aga gga gcg gcg gtt gtc aca agc cta gtt Ala Asp Ala Thr Leu Ala Arg Gly Ala Ala Val Val Thr Ser Leu Val 245 250 255	768
gag tgt atg caa aat gtt gct att atg gat tat gat agg acg cgt ctt Glu Cys Met Gln Asn Val Ala Ile Met Asp Tyr Asp Arg Thr Arg Leu 260 265 270	816
tat tat aat tat aac cga aga tta att atg gca aag gat gat gta acg Tyr Tyr Asn Tyr Asn Arg Arg Leu Ile Met Ala Lys Asp Asp Val Thr 275 280 285	864
ggc atg aag gga gag tgt ttg gtc gtg tgg ccg ccc gtt gta tgt ggg Gly Met Lys Gly Glu Cys Leu Val Val Trp Pro Pro Val Val Cys Gly 290 295 300	912
gag ggt gta gta ttt gac tca ccc tta cag cgg ctt tct ggg gag gtg Glu Gly Val Val Phe Asp Ser Pro Leu Gln Arg Leu Ser Gly Glu Val 305 310 315 320	960
ttg gcc tgt tat gca tta cgt gaa cat gct cgc gtc tgc caa gtt tta Leu Ala Cys Tyr Ala Leu Arg Glu His Ala Arg Val Cys Gln Val Leu 325 330 335	1008
aat aca gcc cct ttg cgc gtg tta ata ggt cgc cgg aat gaa gat gat Asn Thr Ala Pro Leu Arg Val Leu Ile Gly Arg Arg Asn Glu Asp Asp 340 345 350	1056
aga tct cac agc aca cgt gcg gtt gat cgt ata atg ggc gag aac gat Arg Ser His Ser Thr Arg Ala Val Asp Arg Ile Met Gly Glu Asn Asp 355 360 365	1104

aca aca cgg gct gga tcg gcc gcg tct aga ctt gta aag cta ata gtt	1152
Thr Thr Arg Ala Gly Ser Ala Ala Ser Arg Leu Val Lys Leu Ile Val	
370 375 380	
aac tta aaa aac atg aga cat gtt gga gat att acc gaa acc gta cgt	1200
Asn Leu Lys Asn Met Arg His Val Gly Asp Ile Thr Glu Thr Val Arg	
385 390 395 400	
tcc tat cta gaa gaa acg ggc aat cac att ctg gaa gga agt gga tcg	1248
Ser Tyr Leu Glu Thr Gly Asn His Ile Leu Glu Gly Ser Gly Ser	
405 410 415	
gtg gac aca tca caa ccg ggg ttt ggc aag gcc aac caa tcc ttt aac	1296
Val Asp Thr Ser Gln Pro Gly Phe Gly Lys Ala Asn Gln Ser Phe Asn	
420 425 430	
ggg ggg gca atg tcc gga aca aca aac gtt caa agt gcg ttt aaa act	1344
Gly Gly Ala Met Ser Gly Thr Thr Asn Val Gln Ser Ala Phe Lys Thr	
435 440 445	
tcg gtg gtt aac agt atc aac ggc atg ctc gag ggt tat gtg aat aat	1392
Ser Val Val Asn Ser Ile Asn Gly Met Leu Glu Gly Tyr Val Asn Asn	
450 455 460	
tta ttc aaa acc att gag ggt ctc aag gat gtg aac agc gat ctg acc	1440
Leu Phe Lys Thr Ile Glu Gly Leu Lys Asp Val Asn Ser Asp Leu Thr	
465 470 475 480	
gaa agg ctc cag ttc aaa gaa gga gag ctg aaa cgg tta cgg gaa gag	1488
Glu Arg Leu Gln Phe Lys Glu Gly Glu Leu Lys Arg Leu Arg Glu Glu	
485 490 495	
agg gta aaa ata aag cca tct aaa ggg tca cat att aca atg gca gaa	1536
Arg Val Lys Ile Lys Pro Ser Lys Gly Ser His Ile Thr Met Ala Glu	
500 505 510	
gaa aca cgt att gcc gat tta aat cac gag gtt ata gat ctt acc ggc	1584
Glu Thr Arg Ile Ala Asp Leu Asn His Glu Val Ile Asp Leu Thr Gly	
515 520 525	
ata ata ggg gat gat gca tat att gcc aat agt ttt caa tct cgt tat	1632
Ile Ile Gly Asp Asp Ala Tyr Ile Ala Asn Ser Phe Gln Ser Arg Tyr	
530 535 540	
atc ccc cct tat gga gat gat ata aaa cgt ttg tct gag cta tgg aaa	1680
Ile Pro Pro Tyr Gly Asp Asp Ile Lys Arg Leu Ser Glu Leu Trp Lys	
545 550 555 560	
cag gaa ctt gtt cgc tgt ttt aag ctt cac cgg gta aac aat aat caa	1728
Gln Glu Leu Val Arg Cys Phe Lys Leu His Arg Val Asn Asn Asn Gln	
565 570 575	
ggc cag gaa att tct gta tca tat tca aat gcg tca atc tca tta cta	1776
Gly Gln Glu Ile Ser Val Ser Tyr Ser Asn Ala Ser Ile Ser Leu Leu	
580 585 590	
gtt gcg ccg tat ttt tca ttc ata tta cgg gcc acc cga tta gga ttc	1824

Val	Ala	Pro	Tyr	Phe	Ser	Phe	Ile	Leu	Arg	Ala	Thr	Arg	Leu	Gly	Phe		
		595					600					605					
ttg	gta	act	caa	agc	gag	gta	cat	agg	tca	gag	gaa	gag	tta	tgc	cag	1872	
Leu	Val	Thr	Gln	Ser	Glu	Val	His	Arg	Ser	Glu	Glu	Glu	Leu	Cys	Gln		
	610					615				620							
gct	att	ttt	aaa	aag	gcg	aga	aca	gag	tcc	tat	tta	tcc	caa	atc	cga	1920	
Ala	Ile	Phe	Lys	Lys	Ala	Arg	Thr	Glu	Ser	Tyr	Leu	Ser	Gln	Ile	Arg		
625					630				635					640			
ata	tta	tat	gaa	atg	cag	gtt	cgc	gca	gag	gta	ata	aaa	cgg	ggc	cca	1968	
Ile	Leu	Tyr	Glu	Met	Gln	Val	Arg	Ala	Glu	Val	Ile	Lys	Arg	Gly	Pro		
			645						650					655			
cgg	aga	aca	cca	agt	cct	tcc	tgg	ggg	ttg	cct	gac	cct	aca	gaa	gat	2016	
Arg	Arg	Thr	Pro	Ser	Pro	Ser	Trp	Gly	Leu	Pro	Asp	Pro	Thr	Glu	Asp		
			660					665					670				
gac	gaa	aga	atc	ccg	gaa	ccc	aat	aaa	ata	aat	aac	caa	tac	atg	cat	2064	
Asp	Glu	Arg	Ile	Pro	Glu	Pro	Asn	Lys	Ile	Asn	Asn	Gln	Tyr	Met	His		
		675					680					685					
gtt	gga	tat	aaa	aac	cta	tcc	cat	ttt	atg	aaa	gga	cac	ccc	cct	gag	2112	
Val	Gly	Tyr	Lys	Asn	Leu	Ser	His	Phe	Met	Lys	Gly	His	Pro	Pro	Glu		
	690					695					700						
agg	tta	cgg	gta	cac	aag	gta	aat	gca	gcg	gat	tcg	acc	tta	ctg	gat	2160	
Arg	Leu	Arg	Val	His	Lys	Val	Asn	Ala	Ala	Asp	Ser	Thr	Leu	Leu	Asp		
705					710					715				720			
aaa	att	cga	gca	aac	cgg	agg	cgc	ggg	gat	ggc	cga	tgg	gat	gtc	cgg	2208	
Lys	Ile	Arg	Ala	Asn	Arg	Arg	Arg	Gly	Asp	Gly	Arg	Trp	Asp	Val	Arg		
				725					730					735			
aat	aaa	tat	acc	cag	cat	ttt	agg	ttg	cag	cggt	aac	gat	cga	caa	ctt	2256	
Asn	Lys	Tyr	Thr	Gln	His	Phe	Arg	Leu	Gln	Arg	Asn	Asp	Arg	Gln	Leu		
			740					745					750				
act	aac	acg	agc	cga	aga	ggg	gtt	gga	tgt	gag	cga	cggt	gat	cga	aga	2304	
Thr	Asn	Thr	Ser	Arg	Arg	Gly	Val	Gly	Cys	Glu	Arg	Arg	Asp	Arg	Arg		
		755				760						765					
tct	tag															2310	
Ser																	
<210>	85																
<211>	769																
<212>	PRT																
<213>	Varicella zoster																
<400>	85																
Met	Ala	Glu	Ile	Thr	Ser	Leu	Phe	Asn	Asn	Ser	Ser	Gly	Ser	Glu	Glu		
1				5				10						15			

Lys	Arg	Ile	Ala	Ser	Ser	Val	Ser	Ile	Asp	Gln	Gly	Leu	Asn	Gly	Ser		
			20					25					30				
Asn	Pro	Asn	Asp	Gln	Tyr	Lys	Asn	Met	Phe	Asp	Ile	Tyr	Trp	Asn	Glu		
		35					40					45					
Tyr	Ala	Pro	Asp	Ile	Gly	Phe	Cys	Thr	Phe	Pro	Glu	Glu	Asp	Gly	Trp		
	50					55					60						
Met	Leu	Ile	His	Pro	Thr	Thr	Gln	Ser	Met	Leu	Phe	Arg	Lys	Ile	Leu		
65					70					75					80		
Ala	Gly	Asp	Phe	Gly	Tyr	Thr	Asp	Gly	Gln	Gly	Ile	Tyr	Ser	Ala	Val		
				85					90					95			
Arg	Ser	Thr	Glu	Thr	Val	Ile	Arg	Gln	Val	Gln	Ala	Thr	Val	Leu	Met		
			100					105					110				
Asn	Ala	Leu	Asp	Ala	Thr	Arg	Tyr	Glu	Asp	Leu	Ala	Ala	Asp	Trp	Glu		
		115					120					125					
His	His	Ile	Gln	Gln	Cys	Asn	Leu	His	Ala	Gly	Ala	Leu	Ala	Glu	Arg		
	130					135					140						
Tyr	Gly	Leu	Cys	Gly	Glu	Ser	Glu	Ala	Val	Arg	Leu	Ala	His	Gln	Val		
145					150					155					160		
Phe	Glu	Thr	Trp	Arg	Gln	Thr	Leu	Gln	Ser	Ser	Leu	Leu	Glu	Phe	Leu		
				165					170					175			
Arg	Gly	Ile	Thr	Gly	Cys	Leu	Tyr	Thr	Ser	Gly	Leu	Asn	Gly	Arg	Val		
				180				185					190				
Gly	Phe	Ala	Lys	Tyr	Val	Asp	Trp	Ile	Ala	Cys	Val	Gly	Ile	Val	Pro		
		195					200					205					
Val	Val	Arg	Lys	Val	Arg	Ser	Glu	Gln	Asn	Gly	Thr	Pro	Ala	Pro	Leu		
	210					215					220						
Asn	Thr	Tyr	Met	Gly	Gln	Ala	Ala	Glu	Leu	Ser	Gln	Met	Leu	Lys	Val		
225					230					235					240		

Ala Asp Ala Thr Leu Ala Arg Gly Ala Ala Val Val Thr Ser Leu Val
245 250 255

Glu Cys Met Gln Asn Val Ala Ile Met Asp Tyr Asp Arg Thr Arg Leu
260 265 270

Tyr Tyr Asn Tyr Asn Arg Arg Leu Ile Met Ala Lys Asp Asp Val Thr
275 280 285

Gly Met Lys Gly Glu Cys Leu Val Val Trp Pro Pro Val Val Cys Gly
290 295 300

Glu Gly Val Val Phe Asp Ser Pro Leu Gln Arg Leu Ser Gly Glu Val
305 310 315 320

Leu Ala Cys Tyr Ala Leu Arg Glu His Ala Arg Val Cys Gln Val Leu
325 330 335

Asn Thr Ala Pro Leu Arg Val Leu Ile Gly Arg Arg Asn Glu Asp Asp
340 345 350

Arg Ser His Ser Thr Arg Ala Val Asp Arg Ile Met Gly Glu Asn Asp
355 360 365

Thr Thr Arg Ala Gly Ser Ala Ala Ser Arg Leu Val Lys Leu Ile Val
370 375 380

Asn Leu Lys Asn Met Arg His Val Gly Asp Ile Thr Glu Thr Val Arg
385 390 395 400

Ser Tyr Leu Glu Glu Thr Gly Asn His Ile Leu Glu Gly Ser Gly Ser
405 410 415

Val Asp Thr Ser Gln Pro Gly Phe Gly Lys Ala Asn Gln Ser Phe Asn
420 425 430

Gly Gly Ala Met Ser Gly Thr Thr Asn Val Gln Ser Ala Phe Lys Thr
435 440 445

Ser Val Val Asn Ser Ile Asn Gly Met Leu Glu Gly Tyr Val Asn Asn
450 455 460

Leu Phe Lys Thr Ile Glu Gly Leu Lys Asp Val Asn Ser Asp Leu Thr
 465 470 475 480

Glu Arg Leu Gln Phe Lys Glu Gly Glu Leu Lys Arg Leu Arg Glu Glu
 485 490 495

Arg Val Lys Ile Lys Pro Ser Lys Gly Ser His Ile Thr Met Ala Glu
 500 505 510

Glu Thr Arg Ile Ala Asp Leu Asn His Glu Val Ile Asp Leu Thr Gly
 515 520 525

Ile Ile Gly Asp Asp Ala Tyr Ile Ala Asn Ser Phe Gln Ser Arg Tyr
 530 535 540

Ile Pro Pro Tyr Gly Asp Asp Ile Lys Arg Leu Ser Glu Leu Trp Lys
 545 550 555 560

Gln Glu Leu Val Arg Cys Phe Lys Leu His Arg Val Asn Asn Asn Gln
 565 570 575

Gly Gln Glu Ile Ser Val Ser Tyr Ser Asn Ala Ser Ile Ser Leu Leu
 580 585 590

Val Ala Pro Tyr Phe Ser Phe Ile Leu Arg Ala Thr Arg Leu Gly Phe
 595 600 605

Leu Val Thr Gln Ser Glu Val His Arg Ser Glu Glu Glu Leu Cys Gln
 610 615 620

Ala Ile Phe Lys Lys Ala Arg Thr Glu Ser Tyr Leu Ser Gln Ile Arg
 625 630 635 640

Ile Leu Tyr Glu Met Gln Val Arg Ala Glu Val Ile Lys Arg Gly Pro
 645 650 655

Arg Arg Thr Pro Ser Pro Ser Trp Gly Leu Pro Asp Pro Thr Glu Asp
 660 665 670

Asp Glu Arg Ile Pro Glu Pro Asn Lys Ile Asn Asn Gln Tyr Met His
 675 680 685

Val Gly Tyr Lys Asn Leu Ser His Phe Met Lys Gly His Pro Pro Glu

690	695	700
Arg Leu Arg Val His Lys Val Asn Ala Ala Asp Ser Thr Leu Leu Asp		
705	710	715 720
Lys Ile Arg Ala Asn Arg Arg Arg Gly Asp Gly Arg Trp Asp Val Arg		
	725	730 735
Asn Lys Tyr Thr Gln His Phe Arg Leu Gln Arg Asn Asp Arg Gln Leu		
	740	745 750
Thr Asn Thr Ser Arg Arg Gly Val Gly Cys Glu Arg Arg Asp Arg Arg		
	755	760 765

Ser

<210> 86
 <211> 666
 <212> DNA
 <213> Varicella zoster

<220>
 <221> CDS
 <222> (1)..(666)

<400> 86	
atg ttt tcg gag ttg cct cct tcc gta ccg acg gca ttg ctt caa tgg	48
Met Phe Ser Glu Leu Pro Pro Ser Val Pro Thr Ala Leu Leu Gln Trp	
1 5 10 15	
ggt tgg gga ttg cat cgt gga ccg tgt tcg atc cca aat ttt aaa cag	96
Gly Trp Gly Leu His Arg Gly Pro Cys Ser Ile Pro Asn Phe Lys Gln	
20 25 30	
gta gcc agc caa cac agt gtt cag aac gat ttt aca gaa aat agc gtt	144
Val Ala Ser Gln His Ser Val Gln Asn Asp Phe Thr Glu Asn Ser Val	
35 40 45	
gat gca aat gaa aaa ttt ccg att ggg cac gcg ggc tgt att gag aaa	192
Asp Ala Asn Glu Lys Phe Pro Ile Gly His Ala Gly Cys Ile Glu Lys	
50 55 60	
acc aaa gac gac tat gta cca ttt gat acg ttg ttc atg gta tca tct	240
Thr Lys Asp Asp Tyr Val Pro Phe Asp Thr Leu Phe Met Val Ser Ser	
65 70 75 80	
att gac gaa ctt ggg cgg aga caa tta acc gac acc atc cgc cgc agc	288
Ile Asp Glu Leu Gly Arg Arg Gln Leu Thr Asp Thr Ile Arg Arg Ser	
85 90 95	

ttg gtt atg aac gcc tgt gaa ata acg gtc gcg tgt acg aaa acc gca	336
Leu Val Met Asn Ala Cys Glu Ile Thr Val Ala Cys Thr Lys Thr Ala	
100 105 110	

gcc ttt tct ggt cga ggc gtg tca cga caa aaa cac gtg acc cta tct	384
Ala Phe Ser Gly Arg Gly Val Ser Arg Gln Lys His Val Thr Leu Ser	
115 120 125	

aaa aat aaa ttc aat cca tcc agt cat aag agc ctg caa atg ttt gtg	432
Lys Asn Lys Phe Asn Pro Ser Ser His Lys Ser Leu Gln Met Phe Val	
130 135 140	

ttg tgt caa aaa acc cat gca ccc cgt gtc aga aac cta ctg tac gag	480
Leu Cys Gln Lys Thr His Ala Pro Arg Val Arg Asn Leu Leu Tyr Glu	
145 150 155 160	

agt att cgt gca aga aga cct cgc cga tat tac acc cgc tca acg gac	528
Ser Ile Arg Ala Arg Arg Pro Arg Arg Tyr Tyr Thr Arg Ser Thr Asp	
165 170 175	

gga aaa tcg cgt ccg ttg gta cca gtg ttt gtg tat gag ttt acg gct	576
Gly Lys Ser Arg Pro Leu Val Pro Val Phe Val Tyr Glu Phe Thr Ala	
180 185 190	

tta gat cgt gtc ctt tta cat aag gaa aat act ttg acc gac caa cca	624
Leu Asp Arg Val Leu Leu His Lys Glu Asn Thr Leu Thr Asp Gln Pro	
195 200 205	

att aat act gaa aat agc ggt cat gga cgt acg aga acg taa	666
Ile Asn Thr Glu Asn Ser Gly His Gly Arg Thr Arg Thr	
210 215 220	

<210> 87
 <211> 221
 <212> PRT
 <213> Varicella zoster

<400> 87

Met Phe Ser Glu Leu Pro Pro Ser Val Pro Thr Ala Leu Leu Gln Trp
1 5 10 15

Gly Trp Gly Leu His Arg Gly Pro Cys Ser Ile Pro Asn Phe Lys Gln
20 25 30

Val Ala Ser Gln His Ser Val Gln Asn Asp Phe Thr Glu Asn Ser Val
35 40 45

Asp Ala Asn Glu Lys Phe Pro Ile Gly His Ala Gly Cys Ile Glu Lys
50 55 60

Thr Lys Asp Asp Tyr Val Pro Phe Asp Thr Leu Phe Met Val Ser Ser
65 70 75 80

Ile Asp Glu Leu Gly Arg Arg Gln Leu Thr Asp Thr Ile Arg Arg Ser
85 90 95

Leu Val Met Asn Ala Cys Glu Ile Thr Val Ala Cys Thr Lys Thr Ala
100 105 110

Ala Phe Ser Gly Arg Gly Val Ser Arg Gln Lys His Val Thr Leu Ser
115 120 125

Lys Asn Lys Phe Asn Pro Ser Ser His Lys Ser Leu Gln Met Phe Val
130 135 140

Leu Cys Gln Lys Thr His Ala Pro Arg Val Arg Asn Leu Leu Tyr Glu
145 150 155 160

Ser Ile Arg Ala Arg Arg Pro Arg Arg Tyr Tyr Thr Arg Ser Thr Asp
165 170 175

Gly Lys Ser Arg Pro Leu Val Pro Val Phe Val Tyr Glu Phe Thr Ala
180 185 190

Leu Asp Arg Val Leu Leu His Lys Glu Asn Thr Leu Thr Asp Gln Pro
195 200 205

Ile Asn Thr Glu Asn Ser Gly His Gly Arg Thr Arg Thr
210 215 220

<210> 88
<211> 480
<212> DNA
<213> Varicella zoster

<220>
<221> CDS
<222> (1)..(480)

<400> 88
atg gca tca cat aaa tgg tta ctg cag ata gtt ttt tta aaa act atc 48
Met Ala Ser His Lys Trp Leu Leu Gln Ile Val Phe Leu Lys Thr Ile
1 5 10 15

aca atc gcg tat tgt ctt cat ctc caa gac gac act ccg ttg ttt ttt 96
Thr Ile Ala Tyr Cys Leu His Leu Gln Asp Asp Thr Pro Leu Phe Phe

	20	25	30	
gga gcc aaa ccg cta tcg gat gtg agt ttg att ata acg gaa ccg tgc				144
Gly Ala Lys Pro Leu Ser Asp Val Ser Leu Ile Ile Thr Glu Pro Cys				
	35	40	45	
gtg tca tcg gta tat gag gcg tgg gac tat gcg gca ccc ccg gta tca				192
Val Ser Ser Val Tyr Glu Ala Trp Asp Tyr Ala Ala Pro Pro Val Ser				
	50	55	60	
aac ctc agc gag gcg cta tcg gga atc gtg gtt aag aca aaa tgt cca				240
Asn Leu Ser Glu Ala Leu Ser Gly Ile Val Val Lys Thr Lys Cys Pro				
	65	70	75	80
gta ccg gaa gtt ata ctt tgg ttt aaa gac aaa caa atg gcg tac tgg				288
Val Pro Glu Val Ile Leu Trp Phe Lys Asp Lys Gln Met Ala Tyr Trp				
	85	90	95	
aca aat cca tac gtc acc tta aag ggg ctg gca caa tct gtt ggt gaa				336
Thr Asn Pro Tyr Val Thr Leu Lys Gly Leu Ala Gln Ser Val Gly Glu				
	100	105	110	
gaa cat aaa agc ggg gac ata cgc gat gct ttg ttg gat gcc ctt tcc				384
Glu His Lys Ser Gly Asp Ile Arg Asp Ala Leu Leu Asp Ala Leu Ser				
	115	120	125	
ggt gta tgg gta gac tct act cca tct tcc aca aat atc ccg gaa aat				432
Gly Val Trp Val Asp Ser Thr Pro Ser Ser Thr Asn Ile Pro Glu Asn				
	130	135	140	
gga tgt gtc tgg gga gcc gac cgt ttg ttc caa cgc gta tgc caa tga				480
Gly Cys Val Trp Gly Ala Asp Arg Leu Phe Gln Arg Val Cys Gln				
	145	150	155	

<210> 89
 <211> 159
 <212> PRT
 <213> Varicella zoster

<400> 89

Met Ala Ser His Lys Trp Leu Leu Gln Ile Val Phe Leu Lys Thr Ile			
1	5	10	15
Thr Ile Ala Tyr Cys Leu His Leu Gln Asp Asp Thr Pro Leu Phe Phe			
20	25	30	
Gly Ala Lys Pro Leu Ser Asp Val Ser Leu Ile Ile Thr Glu Pro Cys			
35	40	45	
Val Ser Ser Val Tyr Glu Ala Trp Asp Tyr Ala Ala Pro Pro Val Ser			
50	55	60	

Asn Leu Ser Glu Ala Leu Ser Gly Ile Val Val Lys Thr Lys Cys Pro
65 70 75 80

Val Pro Glu Val Ile Leu Trp Phe Lys Asp Lys Gln Met Ala Tyr Trp
85 90 95

Thr Asn Pro Tyr Val Thr Leu Lys Gly Leu Ala Gln Ser Val Gly Glu
100 105 110

Glu His Lys Ser Gly Asp Ile Arg Asp Ala Leu Leu Asp Ala Leu Ser
115 120 125

Gly Val Trp Val Asp Ser Thr Pro Ser Ser Thr Asn Ile Pro Glu Asn
130 135 140

Gly Cys Val Trp Gly Ala Asp Arg Leu Phe Gln Arg Val Cys Gln
145 150 155

<210> 90
<211> 909
<212> DNA
<213> Varicella zoster

<220>
<221> CDS
<222> (1)..(909)

<400> 90
atg gct tct gta gca ggt aac gct agt aat atc tca cca cag ccc ccg 48
Met Ala Ser Val Ala Gly Asn Ala Ser Asn Ile Ser Pro Gln Pro Pro
1 5 10 15

tcg ggc gtt cca acc gga ggg gaa ttt gta ctg ata cct acc gcg tat 96
Ser Gly Val Pro Thr Gly Gly Glu Phe Val Leu Ile Pro Thr Ala Tyr
20 25 30

tat tca cag ctg tta acc ggg cag act aaa aat ccg cag gta tca att 144
Tyr Ser Gln Leu Leu Thr Gly Gln Thr Lys Asn Pro Gln Val Ser Ile
35 40 45

gga gct cca aat aac gga cag tat atc gtc ggg cca tat gga tct cca 192
Gly Ala Pro Asn Asn Gly Gln Tyr Ile Val Gly Pro Tyr Gly Ser Pro
50 55 60

cac ccg cct gcc ttc cca cct aat aca ggg ggt tat ggt tgc cct ccg 240
His Pro Pro Ala Phe Pro Pro Asn Thr Gly Gly Tyr Gly Cys Pro Pro
65 70 75 80

gga cac ttc ggg gga ccg tac ggg ttt ccg gga tat cca cca ccc aat 288

Gly	His	Phe	Gly	Gly	Pro	Tyr	Gly	Phe	Pro	Gly	Tyr	Pro	Pro	Pro	Asn		
				85					90					95			
cgt	ttg	gaa	atg	caa	atg	tcc	gca	ttt	atg	aac	gca	ttg	gcc	gcc	gaa	336	
Arg	Leu	Glu	Met	Gln	Met	Ser	Ala	Phe	Met	Asn	Ala	Leu	Ala	Ala	Glu		
			100					105				110					
cgg	ggt	att	gac	ttg	cag	acc	ccg	tgt	gta	aat	ttt	cca	gac	aaa	acc	384	
Arg	Gly	Ile	Asp	Leu	Gln	Thr	Pro	Cys	Val	Asn	Phe	Pro	Asp	Lys	Thr		
		115					120					125					
gat	gtc	cgt	cgt	cca	gga	aaa	cgg	gat	ttc	aag	agc	atg	gat	caa	agg	432	
Asp	Val	Arg	Arg	Pro	Gly	Lys	Arg	Asp	Phe	Lys	Ser	Met	Asp	Gln	Arg		
	130					135					140						
gaa	ttg	gat	tct	ttt	tat	agt	ggg	gag	tct	caa	atg	gac	gga	gag	ttt	480	
Glu	Leu	Asp	Ser	Phe	Tyr	Ser	Gly	Glu	Ser	Gln	Met	Asp	Gly	Glu	Phe		
	145				150					155					160		
ccc	tca	aat	ata	tat	ttt	ccc	ggt	gaa	cca	acg	tat	ata	acg	cat	cgg	528	
Pro	Ser	Asn	Ile	Tyr	Phe	Pro	Gly	Glu	Pro	Thr	Tyr	Ile	Thr	His	Arg		
			165					170						175			
aga	cgt	cga	gtt	tct	cca	tca	tat	tgg	cag	agg	aga	cac	aga	gtt	tct	576	
Arg	Arg	Arg	Val	Ser	Pro	Ser	Tyr	Trp	Gln	Arg	Arg	His	Arg	Val	Ser		
			180					185					190				
aat	ggt	cag	cac	gaa	gag	ctt	gct	ggg	gtt	gtg	gca	aaa	ctg	caa	cag	624	
Asn	Gly	Gln	His	Glu	Glu	Leu	Ala	Gly	Val	Val	Ala	Lys	Leu	Gln	Gln		
		195				200					205						
gag	gtt	aca	gag	cta	aaa	tca	caa	aat	ggg	aca	caa	atg	cct	ttg	tcg	672	
Glu	Val	Thr	Glu	Leu	Lys	Ser	Gln	Asn	Gly	Thr	Gln	Met	Pro	Leu	Ser		
	210				215						220						
cac	cat	aca	aat	ata	cca	gag	ggg	aca	cgg	gat	cct	cga	ata	tcg	att	720	
His	His	Thr	Asn	Ile	Pro	Glu	Gly	Thr	Arg	Asp	Pro	Arg	Ile	Ser	Ile		
	225				230				235					240			
tta	tta	aaa	cag	ctt	caa	agc	gtt	tcg	ggt	cta	tgc	tca	tcc	caa	aat	768	
Leu	Leu	Lys	Gln	Leu	Gln	Ser	Val	Ser	Gly	Leu	Cys	Ser	Ser	Gln	Asn		
			245					250						255			
aca	aca	agc	acc	cca	cat	aca	gat	aca	gtt	gga	caa	gat	gta	aat	gca	816	
Thr	Thr	Ser	Thr	Pro	His	Thr	Asp	Thr	Val	Gly	Gln	Asp	Val	Asn	Ala		
			260					265					270				
gtg	gag	gcg	agt	tcc	aag	gcc	cct	tta	ata	cag	ggg	tcc	acg	gca	gac	864	
Val	Glu	Ala	Ser	Ser	Lys	Ala	Pro	Leu	Ile	Gln	Gly	Ser	Thr	Ala	Asp		
		275				280						285					
gac	gcc	gat	atg	ttt	gca	aat	cag	atg	atg	gtg	ggg	cgg	tgt	taa		909	
Asp	Ala	Asp	Met	Phe	Ala	Asn	Gln	Met	Met	Val	Gly	Arg	Cys				
	290					295					300						

<210> 91

<211> 302
 <212> PRT
 <213> Varicella zoster

<400> 91

Met Ala Ser Val Ala Gly Asn Ala Ser Asn Ile Ser Pro Gln Pro Pro
 1 5 10 15

Ser Gly Val Pro Thr Gly Gly Glu Phe Val Leu Ile Pro Thr Ala Tyr
 20 25 30

Tyr Ser Gln Leu Leu Thr Gly Gln Thr Lys Asn Pro Gln Val Ser Ile
 35 40 45

Gly Ala Pro Asn Asn Gly Gln Tyr Ile Val Gly Pro Tyr Gly Ser Pro
 50 55 60

His Pro Pro Ala Phe Pro Pro Asn Thr Gly Gly Tyr Gly Cys Pro Pro
 65 70 75 80

Gly His Phe Gly Gly Pro Tyr Gly Phe Pro Gly Tyr Pro Pro Pro Asn
 85 90 95

Arg Leu Glu Met Gln Met Ser Ala Phe Met Asn Ala Leu Ala Ala Glu
 100 105 110

Arg Gly Ile Asp Leu Gln Thr Pro Cys Val Asn Phe Pro Asp Lys Thr
 115 120 125

Asp Val Arg Arg Pro Gly Lys Arg Asp Phe Lys Ser Met Asp Gln Arg
 130 135 140

Glu Leu Asp Ser Phe Tyr Ser Gly Glu Ser Gln Met Asp Gly Glu Phe
 145 150 155 160

Pro Ser Asn Ile Tyr Phe Pro Gly Glu Pro Thr Tyr Ile Thr His Arg
 165 170 175

Arg Arg Arg Val Ser Pro Ser Tyr Trp Gln Arg Arg His Arg Val Ser
 180 185 190

Asn Gly Gln His Glu Glu Leu Ala Gly Val Val Ala Lys Leu Gln Gln
 195 200 205

Glu	Val	Thr	Glu	Leu	Lys	Ser	Gln	Asn	Gly	Thr	Gln	Met	Pro	Leu	Ser
210						215					220				

His	His	Thr	Asn	Ile	Pro	Glu	Gly	Thr	Arg	Asp	Pro	Arg	Ile	Ser	Ile
225					230					235					240

Leu	Leu	Lys	Gln	Leu	Gln	Ser	Val	Ser	Gly	Leu	Cys	Ser	Ser	Gln	Asn
				245					250					255	

Thr	Thr	Ser	Thr	Pro	His	Thr	Asp	Thr	Val	Gly	Gln	Asp	Val	Asn	Ala
			260					265						270	

Val	Glu	Ala	Ser	Ser	Lys	Ala	Pro	Leu	Ile	Gln	Gly	Ser	Thr	Ala	Asp
		275					280					285			

Asp	Ala	Asp	Met	Phe	Ala	Asn	Gln	Met	Met	Val	Gly	Arg	Cys
290						295					300		